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PENN'ORTH OF CHIPS

PENN'ORTH OF CHIPS:

BACKWARD CHILDREN
IN THE MAKING

by

CHARLES S. SEGAL

With an Introductory Note by
DR. CYRIL BURT

LONDON
VICTOR GOLLANCZ LTD
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C. S. S.

NOTE

The London County Council accepts no responsibility for the Author's opinions or conclusions.

INTRODUCTORY NOTE

THIS INTERESTING AND instructive volume had its origin in a detailed inquiry into the social conditions of a group of backward boys living in a poor working-class area. The immediate purpose of the inquiry was to compare the abilities and educational attainments of the individual pupils with their respective home circumstances. Such an investigation, it was felt, might lead to practical recommendations which would be of the greatest help to those who are concerned with the care and training of school children. The results are vividly reported in these pages.

The author is a teacher of long experience. He has spent the greater part of his life among children such as he describes, and is therefore well acquainted with their work in the classroom and the conditions under which they live. Moreover, as a study of his chapters will show, he has endeavoured, in company with an increasing number of teachers, to keep abreast of modern scientific work in the fields of educational and psychological research and of remedial training and teaching. With unusual diligence, Mr. Segal has personally observed and recorded, over a long period of years, all the accessible facts relating to the domestic, the social, the physical, and the mental conditions of his pupils. The outcome is a first-hand picture, at once graphic and detailed, of the numerous adverse factors that handicap so many of our school pupils.

From my own experience, I can readily testify that what he finds is by no means exceptional. On the contrary, it is typical of the conditions that obtain, not only in the slums of London, but in many of the large industrial centres. All over the country, both teachers and education authorities are now giving more and more attention to children who are retarded either physically or educationally or in both respects at once. A book like the present, therefore, should have a strong appeal, not only to parents and to teachers, but also to school medical officers, care committee workers, and the growing number of enlightened citizens who have the welfare of the child at heart.

The problems which Mr. Segal has set out to study are by no means new. Are the duller and more backward pupils ill-fed and ill-clad as compared with the brighter? Are they drawn mainly from families of poor economic status, or is their poverty just an occasional accident? How far is such poverty a barrier which even the brightest child can never surmount? What are the effects on educational progress of an improvement in feeding and in living conditions generally? These are questions which have often been glibly asked and as glibly answered. They are questions which, in spite of half a century of experience and discussion, still receive widely different and even flatly contradictory replies.

It is this continual contradiction that largely holds up our practical reforms. Why waste public money on trying to remedy what the experts have declared to be irremediable? Since Mr. Segal takes the more hopeful view, perhaps the most useful thing I can do will be to forestall some of the criticisms which his views are bound to excite. Such criticisms, I think, are likely to rest on an oversimplification of the issues.

In approaching these complex controversies a psychologist is bound to deprecate, not only the unscientific character of many of the answers given, but also the unscientific way in which the questions themselves are commonly formulated. Often an investigator is merely demonstrating that poverty is a mere *accompaniment* of dullness, when he thinks he is demonstrating that poverty is the *cause* of dullness. The critic notes the omission; and draws the opposite conclusion, namely, that the dullness has caused the poverty, thus committing the same fallacy in an inverted form. Time after time in such discussions two alternatives are assumed to be mutually exclusive when in all probability they largely overlap. Thus one of the disputants puts the plain issue: "Is lack of educational progress due to inherited dullness or to unfavourable environment, yes or no?" Without further inquiry, the other could safely reply: "It is, almost invariably, due to both". The real problem nearly always is: "Which is the predominant factor in this case or in that?"

Nor can the answer be given on the basis of casual impressions, gleaned incidentally by impartial observers, however experienced. The differences both in causes and in effects must be measured. The measurements, no doubt, can only be approximate; but unless the data are put into numerical form, no logical argument is possible. One of the outstanding merits of Mr. Segal's discussion, as compared with those of the many able teachers who have dealt with the same problems before him, and reached such conflicting conclusions, is that he always endeavours to make his observations and his arguments quantitative. He does not vaguely state that his boys are deplorably backward: he tells us precisely by how much each one differs from the normal child. He does not merely say that his boys look under-nourished; he tells us precisely how their height and weight fall short of other boys' of the same age in a model residential school.

It will, of course, at once be objected that no one can measure so abstract and qualitative a thing as the result of an efficient education. If one child acquires from school a manual skill that is of use to him in his subsequent vocation, while another acquires an all-round liberal culture, how can we express the difference between the two in figures? Actually, to devise ways of measuring such differences is no harder than to measure the difference in value between the work of a skilled artisan and that of a Cabinet minister. For certain purposes their value is expressed in pounds, shillings and pence, though no doubt the skilled artisan would criticize the measurement of his own value as a very poor approximation and the Cabinet minister might make a similar retort. In dealing with social problems, measurement is and must be constantly employed; and it is put forward, not because we consider such measurement to be unquestionably exact, but because without it we cannot argue logically at all.

This further admission, however, implies that, since we recognize the inexactitude of all such measurements, we ought also to measure that inexactitude itself. Thus all educational and sociological arguments should really take the form of arguments based on probability. In the last resort, this is no doubt true of every inference that human beings can attempt; but in our private affairs, unless we are interested in horse-racing and sweepstakes, we do not usually trouble to convert our probabilities into precise numerical ratios.

To insist on bringing statistics into educational debates may savour of academic pedantry. But a statistical standpoint is here of practical value for at least two reasons. First of all, the critical reader who disagrees with conclusions like those of Mr. Segal may be tempted to dismiss his arguments without realizing that they merely profess to deduce a set of probabilities. No one can guarantee that five pounds a year spent on feeding Tommy Bright will increase Tommy's value as a citizen, and so ultimately add five pounds, with interest, to the national income. But we can easily calculate whether it would be a reasonably safe speculation. And the first step is to gauge Tommy's innate potentialities, which so far he has not been able to develop to the full.

Many teachers may distrust Mr. Segal's efforts to measure inborn ability in this way. They will declare--and with some justification—that a child's mind cannot possibly be measured with the same accuracy as we measure a pint of milk or a pound of flesh. But when Mr. Segal declares on the basis of his tests that a child is backward by 20 per cent. of his age, he does not pretend that his figure is an infallible measurement of the innate capacity with which the child was equipped at birth. True, the test *endeavours* to distinguish what is inborn from what is acquired; but, once again, it can only state probabilities, not certainties. A child with an I.Q. of only 80 will *probably* never reach standard VI attainments, and *probably* (though this is less certain) never succeed as a clerk or typist. In 49 cases out of 50 the first statement will be true; in 19 cases out of 20, the second. Yet exceptions will always arise.

But a second and still more cogent reason for putting results into figures. When we are dealing with practical problems on a very wide scale, particularly with problems in which huge sums of money are involved, it is essential to think in terms of probability. If you are proposing to insure your own life, you will not, I imagine, sit down and make a formal calculation of the number of years you are likely to live, or of the profit and relative safety of this or that type of investment. But an insurance society could never pay its way, unless it calculated all such probabilities within a very close margin of error. Now the teacher dealing with a class, the headmaster dealing with a school, the education officer dealing with a wide area, must, if they are to consider the relative value of different courses of administrative action, carefully weigh the probabilities for and against. They are gambling with public money: and, contrary to popular notions, if you gamble on a large scale and base your gambling on a scientific system, your net profit can be made a virtual certainty.

Mr. Segal's study is confined to a small group of boys. But that does not make his figures untrustworthy. I would rather have a careful and intensive study of a handful of cases than so-called statistics gathered by the thousand, with only an hour or two spent over each case. As Mr. Segal points out, probabilities can be usefully deduced even from a tiny group, provided the preliminary investigation is careful and accurate. But to make these probable inferences more certain still we urgently need a number of similar investigations upon similar groups all over London, and, indeed, all over the country. There are, as I know from personal experience, a great many teachers who, in the immediate interests of their pupils, apply intelligence tests and make detailed inquiries into their health and home conditions. We want such data recorded, so that the results shall not merely be directly useful to the particular teacher and the particular pupils alone, but also available to all their colleagues. Only in this way can the experience of every observant teacher be put at the command of all. It is largely by pooling and publishing the personal experience of individual doctors that the empirical science of medicine has been built up: similar efforts are essential to build up a sound science of teaching. Every educationist, therefore, should be grateful, not merely to Mr. Segal for the labour that he has bestowed on describing the results of his inquiries, but also to Mr. Victor Gollancz for his willingness to print this report, and thus make the results accessible to all who are interested in the welfare of our school population.

Meanwhile, from this volume alone certain facts and possibilities stand out with salient clearness. First, in spite of all our efforts to improve the health, nutrition, and environmental conditions of the pupils in our schools, large numbers of them still live in appalling circumstances that will be credited only by those who have gone into the homes and seen at first hand how these children live. Secondly, there can be no question that it is the children from homes such as these who form our most difficult problems in the classroom, and who, if nothing further is done for them, will continue to present equally difficult problems to society when they are grown up. No one I imagine would maintain that the lowered mental efficiency of these unfortunate children is due entirely to their poverty. Much of it no doubt is hereditary; and naturally, if from some inherited defect the whole family is as dull as the child himself, none of its members are likely to earn wages high enough to keep that child in reasonable comfort. But that is no reason why we should allow either the child, or for that matter the adults, to continue in misery. And moreover, granting that the inefficiency is in part innate, the ill-health and malnutrition must inevitably lower the child's level still further. It follows that, although we cannot transform an inborn dullard into a scholarship winner by merely attending to his diet and his health, we can nevertheless make him a much more efficient pupil than he would otherwise have been.

But such broad generalities are of little value as they stand. We want to know the precise details. What is the probability that this or that child of this or that type will ever be able to cope with the ordinary school curriculum? How many are so dull and backward as to require special educational provision? What are the actual handicaps in regard to clothing, diet, sleeping conditions, general health, daily occupation, from which such children chiefly suffer? What can be done by providing camps, nursery schools, special meals, better opportunities for regular exercise in sunshine and fresh air, to fit the child to reap a greater benefit from the daily teaching in the classroom? And how far will this go towards reducing the whole problem of juvenile backwardness and delinquency?

Mr. Segal's book is full of detailed information on these several points. Though he begins with definite figures, he ends by presenting us with concrete pictures far more vivid than any statistical table; and he makes out a very strong case for numerous specific reforms that appear not only practicable but urgently desirable. Without necessarily endorsing every conclusion as it stands, I can sincerely recommend his book to everyone who realizes that the citizens of tomorrow are the children of today.

C. B.

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CHAPTER I

BACKGROUND

The investigation—The School Building—Incidents leading to enquiry—"A healthy mind in a healthy body"—Objective.

These pages deal with an investigation by a class-teacher into the mental, educational, physical and environmental conditions of a class of twenty-six backward boys in a Junior School in North Kensington. Opportunity was afforded by the London County Council to conduct part of the inquiries in school time during November, 1937, the remainder of the work being done out of school, and during the Christmas holiday. A report was submitted to the L.C.C. Education Officer at the end of January, 1938. The study of this class was undertaken with a view to observing what were the main causes leading to backwardness and to suggest remedial measures for accelerating the rate of educational progress.

The teacher has spent twenty years in teaching in schools in slum areas, the last ten years having been spent in the school concerned. Eight years ago, His Majesty's Inspector —Mr. P. B. Coles—in the course of a visit, suggested the formation of a "Reading Class" for backward readers. On reorganisation of the school as a Junior Boys', the Backward Class or Class 4, as it is officially termed, was formed. It was at first referred to as the "Dustbin" of the school. It is now looked upon as a vital part in the school organisation and is in the nature of a remedial and experimental class. The aim is to discover the causes of retardation and to apply such remedies as will secure the return of as many as possible of the boys to the normal school stream of progress. Some boys who have passed through this class have sat for the Final Junior County Scholarship Examination.

The writer has been in charge since its inception, and in order to get the special training necessary attended two courses organised on behalf of the Board of Education by the Central Association for Mental Welfare. Two further sets of Lectures and Practical Work with the National Institute of Industrial Psychology (N.I.I.P.) gave him the necessary qualifications in the administration of Intelligence Tests.

The school is in the northern end of the second richest Borough in the Metropolis. In the south of the Borough are the Museums, Kensington Palace, and palatial modern flats letting at rents up to £520 per annum. In the north are "improvement" areas from one of which come many of the children dealt with in these pages. In this district are old Victorian basemented houses, usually a family to each floor with insufficient water taps and lavatory accommodation. Boys and girls are also drawn from some newer blocks of flats, which have certainly raised the housing conditions of the families occupying them. The building in which the children are taught is of the old three-decker type, erected in the days when the advantages of sunshine, air and light were not appreciated. It might be one of the schools described by Mr. S. E. Urwin, Cambridge County Architect—"Gaunt, uninteresting, soulless, prison-like buildings, surrounded by tarred macadam and high walls." Of recent years, attempts have been made to improve the amenities by the installation of electric points for purposes of lantern shows, cinema projections and radio.

Observations on the relationship between environment and backwardness by leading lecturers in the Courses for Teachers of Backward Children led the writer one morning to inquire into the food of his boys. Here is one of the conversations that ensued:

"What did you have for breakfast, John?"

"Half a cup of tea and half a slice of bread and butter."

"Real butter?"

"No, sir. Margarine."

"Well, John. What did you have for dinner yesterday?"

"Bread and butter and tea."

"What did you have for tea then?"

"Half a slice of bread and half a cup of tea."

Teacher, thinking that the family had a good supper when Dad came home in the evening, asked:

"And what about supper?"

"Oh! we never have any supper, except on Saturday night, when we get a penn'orth o' chips."

The story was corroborated by questioning the boy's brother who had been sent for there and then.

At about the same time, another teacher was describing his work at the school for his College Principal. There was little in this description of the children's home surroundings. When the teacher's attention was drawn to this omission, he made further inquiries. Later in the day the teacher (not a Cockney, but undoubtedly influenced by the school environment) came to the present writer and exclaimed: "Blimey! I never thought such conditions existed. This boy is sleeping four in a bed—the eldest being a girl of thirteen!"

The picture would not be complete without some reference to the clothing worn. On one occasion, the class was playing football in the playground. Jumbo, tall and lanky, took a flying kick at the ball. Up in the air it sailed, and after it went the front half of his boot—toe-cap, sole and all. What was left of the boot was held to the foot by an old knotted lace.

This note was sent by one mother in November, 1937: "I am sorry Billy hasn't been to school, as he hasn't got any shoes, but I have put some paper in for now, so will you let him stay in his class during playtime as he has got an awful cold." On investigation it transpired there were five children in the family, ages 8, 6, 5, 3 and 1 years respectively. The boy of eight was receiving attention for chest trouble, while the boy of three had paralysis in the leg. He needed a special pair of shoes for which they were paying by instalments. The father had been unemployed until a fortnight previously.

Another boy, early this year, complained of a bleeding toe. His left boot had two holes 1¼ inches in diameter in the soles which were worn right through to the skin; stockings being threadbare.

As an example of false ideas on children's health, one can quote the mother of a large family living in a two-roomed basement in the "Improvement Area" who, on being asked how she managed to keep her children fit, replied: "Oh! they keep quite well except for measles, chicken-pox, scarlet-fever and such like."

That there is a close relationship between the physical condition of the body and educational achievement, has been recognised for centuries. The saying which expresses this most forcibly is: "A healthy mind in a healthy body." The Board of Education acknowledges this principle, too, for in the Education Acts power is given to Authorities administering education to provide school meals where children are deemed to be not fully benefiting from the instruction given them, in consequence of insufficiency of food.

It is hoped by taking into account the results of this investigation and the opinions of other experts to show how intellectual development depends on physical well-being, and to suggest a general programme for the prevention and treatment of physical and mental retardation among school children.

CHAPTER II

MENTAL TESTING

Testing intelligence—Definition—Uses—Vocational selection—Explanation of terms—Typical questions—Mentally defectives and Special Schools—Intelligence of the Class tested—Vocabulary—Significance of the test-figures—Environment and Intelligence Quotient (I.Q.)—Constancy of I.Q. questioned—Optimum development—Conclusions—Educational Testing—Attainment in School subjects and Mental Age—Standardised tests—Definition of backwardness—Incidence of backwardness—Provision for backward children—Distribution in the country.

TESTING INTELLIGENCE

WHAT IS INTELLIGENCE?

The generally accepted definition by English psychologists is the innate capacity for intellectual development.

There are a number of tests for assessing the intelligence of the child. The most widely administered for individual testing in this country are the Burt's Revision of the Stanford Binet Tests. Some of the abilities tested are reasoning ability, memory, speed of response and definition of words. The questions are of such a nature as to eliminate largely the direct influence of schooling. Group Tests have been devised for testing a large number of cases at one time. Performance Tests are used for measuring intelligence when it is necessary to overcome language difficulties, and the handicaps due to environment suffered by the slum child.

These tests serve a number of useful purposes. With regard to the Backward Child, testing will indicate whether the child is innately dull, and if such is the case, the teacher will not try to push him beyond his intellectual capacity. If, however, a boy's level in reading is found to be well below his native powers for learning, then remedies must be sought to make his educational attainment approximate more closely to his ability.

The case of a lad of eight years (not in attendance at the school under investigation) whose father was a university graduate and mother had had a secondary school education, serves to show one use to which the tests can be put. The boy was extremely backward in arithmetic. He could not add a single short column of three figures. The parents, greatly worried, brought him to the writer. Tests indicated that he was quite as bright as the normal boy of ten and a half years in intelligence. His parents were greatly reassured on hearing this, as they were beginning to think the boy naturally dull. Investigation into the child's history showed frequent changes of school and long absences in consequence of illness and holidays. Special coaching in arithmetic was given. In a month reports on his progress at school showed a change—he was catching up in arithmetic. After two months he was up to the standard of his class, and after three months, he was put to help other boys.

These tests are also used for discovering the bright children who will benefit from a secondary school education, for vocational guidance, and for detecting the mentally defective child for transfer to a special school. The Group Tests were first used on a large scale in the U.S.A. during the Great War. They have also been used for retaining manual workers in a factory. Those who scored highest were dismissed, the dull men and women being retained. The explanation given was that the work was of a mechanical nature requiring little intelligence, while people with a higher degree of intelligence were more prone to require better conditions of work in the factory and higher wages, and would tend to promote Trade Union organisation to secure those ends. A London girl had a similar experience. In reply to an advertisement she applied for a post. She was submitted with many others to a Group Test. The applicants naturally did their best to fill vacancies. Those who did worst were appointed. It has been observed in the U.S.A. that factory workers below normal intelligence are employed at lower rates of pay for the same work than those of a higher intellectual level.

EXPLANATION OF TERMS USED

To follow the investigations carried out with this group of backward boys, it is necessary to understand the terms used. Chronological Age is the age from birth. Mental Age shows the degree of intellectual maturity and is obtained from the Intelligence Tests. It is by comparing the Mental Age with the Chronological Age that we know how bright or how dull a child is. Usually the result is expressed in terms of I.Q., or Intelligence Quotient, derived by dividing the Mental Age by the Chronological Age and multiplying by 100. In the Typewritten Version of Burt's Revision of the Stanford Binet Tests, to which the boys under examination were submitted, there are a number of questions, usually five for each year of age which a normal child of that age should be able to answer correctly. Typical questions are repetition of a series of numbers forwards or backwards, pointing out similarities or differences between two or three objects and explaining pictures. A child whose age from birth was 10, and whose Mental Age was 10, would have an I.Q. of 100, and would be considered an average child. A boy of 10 years with a Mental Age of 8 years, would have an I.Q. of 80, and would be considered a dull child. Children with an I.Q. between 70 and 85 are deemed dull; between 90 and 110 are considered normal. The average intelligence required to win a scholarship in London is 130. A fee-paying child can, however, secure admission to a Secondary School with a far lower I.Q. There are exceptions to this practice. In Middlesex all children wishing to gain admission to a Secondary School must pass the necessary qualifying examination irrespective of fee paid.

The Intelligence Quotient of a child plays a great part in determining whether he is transferred to a school for Mentally Defectives. One wonders if the importance of such a transfer to the life of the child is realised. Such schools are known as "Silly Schools". One boy, in the class being discussed, is teased because his brother attends an M.D. School. A mother of children is jeered at by her neighbours because she attended a "Silly School". It might be worth considering the establishment in an ordinary elementary school of a special class for M.D's who show good social traits. To such a central class could be sent children of low intelligence from neighbouring schools. One must bear in mind the present law in relation to Mentally Defective Children, namely attendance to the age of sixteen years at a special school or class for certified children for educational purposes, and to give protection and training necessary during early adolescence. With the extension of the school-leaving age (with exemptions) to fifteen years, the discrepancy in age between the normal child at an elementary school and the M.D. child in a special class at such a school would not be so marked.

Of the twenty-six boys tested in the class under consideration, seventeen were found to be of normal intelligence, eight were dull and one had an I.Q. of 51. The lad with the low I.Q. was later examined by the School Medical Authorities and recommended for a Special School for Mentally Defectives. The average age of the class was 9½ years, ranging from 8 years 5 months to 10 years 8 months. The average Mental Age was 8·7 years, excluding the special case mentioned. The average I.Q. was 91, again excluding the boy with the very low intelligence.

Part of the Binet Tests consists of explaining the meaning of a list of words. A normal child of 8 years of age is expected to know one-fifth of the list or 20 per cent; a child of 10 should know 30 per cent of the words. The average for the class was 18 per cent. Taking into account that the average chronological age was 9½ and the mental age 8·7, it will be seen that the children's vocabulary is very limited.

The Headmistress of Lowther College at a prize distribution, which was afterwards broadcast, pointed out that a lack of good conversation at home was responsible for the girls' inadequate vocabularies.

SIGNIFICANCE OF THE TEST FIGURES

Binet Tests do not cover every side of a person's mental make-up. They are mainly of a verbal nature, and many of the questions depend upon a background of a cultural level which is rarely found, through economic conditions, in a working-class home. It follows, therefore, that the child from a home, where the conversation is of a high level, where there are books and newspapers, which arranges visits to places of interest and amusement and regular holidays in the country and seaside, has the advantage in performing these tests over a child from a home where little or nothing can be spent on those things. To exemplify the poor mental background, one can recount the incident in connection with a class visit to the show-rooms of a firm of domestic hot-water boilers. On getting off the bus, the teacher remarked, "This is Oxford Circus." A boy looked round and said "Where?" After an explanation, the boy remarked, "Oh! I thought we should see a real circus—one with animals."

As an example of lack of simple ideas, a class in a poor area was asked to draw an "island". A child in his reply drew a "road island", the only kind of island he knew. In the case of a child whose home was visited, the only paper that entered the house was a Sunday paper.

The Board of Education in a Report of its Inspectors entitled *The Education of the Backward Child* (H.M. Stationery Office, 1937), states:

> "Many children who have relatively low I.Q.s, have other gifts which will enable them to go through life as independent and useful citizens; and it is extremely unsafe to label any person as generally and finally dull on the basis of a verbal test. The potential powers of dull children are seldom realised. Very superior intellects may have less practical ability than some dull people."

Backward children often reach a higher standard in practical work than in the 3 Rs (Reading, Writing and Arithmetic). The L.C.C. Report on Backward Children observes:

> "There is, of course, little or no ground for suggesting that backward children do craft work as well as or better than children of average intelligence. They can, however, often do handwork better than they can do written exercises, and with patient appropriate training can be brought to learn out a craft job well enough to feel that they have accomplished something worth while."

HEREDITY AND INTELLIGENCE

There are many who believe that intelligence is handed down from parent to child, like material possessions or one's surname; that children born of parents with superior material possessions are also gifted with superior mental powers; that the poor child is an inferior child. Professor Cyril Burt says:

> "The influence of heredity is far more elusive than was formerly supposed. Galton's Law of Regression, a law definitely founded on statistics, reminds us that the children of geniuses are rarely so brilliant as their parents; and by the same principle, the offspring of the dull are seldom quite so dull. The chip may be better than the block"[1]

The distribution of backwardness in the country does show, however, a higher incidence of retardation among the poor than the rich, and this, as will be shown, is largely due to the better social and cultural conditions that can be obtained with a rise in economic level.

ENVIRONMENT AND INTELLIGENCE QUOTIENT

Professor J. L. Gray, states:

> "The constancy of the I.Q. is only relative. When we say that it is constant, we mean simply that if nothing

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[1] *The Backward Child*—Dr. Cyril Burt. (University of London Press.)

> occurs to raise or depress an individual's comparative intelligence it will tend to remain the same. Sometimes it is held to prove that intelligence is not influenced by environment. We know quite well that when some really substantial change takes place in a child's environmental history, his I.Q. will either rise or fall by a greater amount than the rise or fall in the group as a whole."[1]

He continues that the elimination of poverty would almost certainly raise the mean Intelligence Quotient of the population and that improved feeding and housing would do more to raise the educational level than extra efforts in the classroom. The studies made by Freeman, Holzinger and Mitchell, of foster children in Chicago, U.S.A., bear out this argument. The conclusions reached are here summarised:

(1) Before being placed in foster homes, the children were tested by Binet's Tests at an average age of 8 years. On being retested 4 years later they had gained on an average 7·5 points in their I.Q. This increase is attributed to the social and cultural superiority of the foster homes.

(2) Of these children, those put into very superior foster homes gained substantially more than those adopted into inferior homes.

(3) Children adopted into a family at an early age and reared with "own" children very closely resembled the blood children of the family.

(4) Children of the same parents adopted by different foster parents resembled each other less than when children of the same parents are reared together.

OPTIMUM DEVELOPMENT

From the earliest days of a child's life there is the natural tendency to grow both physically and mentally. To develop to his fullest, adequate material conditions such as food, air, sunshine, physical exercise and rest, as well as a high cultural standard and opportunities for learning by experience, are necessary. The earlier the child is provided with an optimum environment, the greater will be his chance of reaching full physical and mental stature.

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[1] *The Nation's Intelligence*—J. L. Gray. (Watts & Co.)

This section can be best summarised by quoting Report 74 of the Medical Research Council, by Dr. L. Isserliss, M.A., D.Sc., on the Relation between Home conditions and the Intelligence of School Children:

> "On the present data, we are entitled to conclude that progressive improvement in home conditions may be expected to react favourably not only on the health, but also on the intelligence of school children. Another argument is thus provided for further efforts to ameliorate the home conditions of the children who attend elementary schools."

EDUCATIONAL TESTING

Before actual teaching can commence, it is necessary to determine what standard each child has reached in essential subjects for a backward boy, namely Reading, Spelling and Arithmetic, and to compare these results with his Mental Age. For this purpose, tests in these and other subjects have been devised for each year from the age at which a child is expected to begin to learn the particular subject. Professor Burt has arranged complete sets of questions for the important subjects in the school curriculum. Between the ages of 4 and 5 years, children are expected to read two-lettered words, and the words increase in difficulty until the age of 14 years is reached, when such words as "Phlegmatic", "Unique", "poignancy" and "phthisis" are expected to be read correctly. In spelling, the child is expected to be able to write the easiest words—namely two- or three-lettered words from the age of 5 years. In arithmetic, the tests begin from the age of 7, for the formal written processes. At this age, a child is expected to add a short sum of tens and units, do a simple subtraction sum, again involving tens and units only; multiply by one figure; add three lines of shillings and pence as 3*s.* 2*d.*+1*s.* 3*d.*+10*d.* and a very easy multiplication of shillings and pence. The questions increase in difficulty for every year of age. The result for each subject is expressed in years as the Reading Age, Spelling Age and Arithmetic Age. To give one example of a boy's testing—his I.Q. was 80 and he was therefore a dull boy. His Chronological Age was 10 years 6 months; his Mental Age was 8·4 years. According to Intelligence Testing he was approximately two years behind in intellectual development. His Reading Age was 6·9 years —1½ years behind his Mental Age, and 3½ years backward in comparison with his age from birth. His Spelling Age was 6·6 years, and in Arithmetic he achieved a score of 7·6 years. He is therefore backward in all these subjects, and behind not only according to his Chronological Age but also his Mental Age. It is the aim in the backward class to secure close approximation of the Educational Age of the various subjects to the Mental Age, and not to force a child beyond his capacity. It will thus be seen how important it is to estimate the intelligence of a child before settling down to actual teaching. For the whole class the Reading Ages stretched from 4·0 years (a boy, whose age was 9 years with a Mental Age of 7·2 years, could not read a single word) to a lad who reached a mark of 9·1 years at an age of 9 years 7 months and a Mental Age of 8·4. This boy could be considered as being in the range of normal intelligence for his age, but was beyond his Mental Age in reading.

The average Reading Age for the class was 6·1 years; the Spelling Age was 6·2 years and that for Arithmetic 8·1. It should be recalled that the average age of the class was 9·5 years, and the average Mental Age was 8·7 years. In reading, then, the children as a whole were 2·6 years behind their Mental Age and 3·4 years behind their age from birth.

A child, who, at the chronological age of 10 or over, is 1 year or less behind in his school work, would be considered average in attainment. A boy of 7 being more than 1 year behind in his subjects; a boy of 11 being two years or more behind; a boy of 14, who is 3 years or more behind at school, would be considered backword.

The extent of backwardness in the country may be realised when it is pointed out that nearly 500,000 out of 5,200,000 school children (March, 1937) are dull and backward. Generally speaking there is no systematic provision for them in the country as a whole, and, further, they are the most difficult section to teach. The Board of Education in its pamphlet already mentioned states:

> "It would be well if successful work with a class of dull children could be reckoned as an added qualification for the post of Head Teacher, for it may be argued with some show of reason that it would be fairer to judge schools and teachers by what they make of their dull pupils than by how their best succeed, since the latter are in most cases able to help themselves, however poor their opportunities be."

The distribution of backwardness is not even. Cyril Burt has established that

> 10 per cent of the general school population of an industrial town like London and Birmingham are backward.
>
> 1 per cent of the school population of areas like Hampstead are backward.
>
> 20 per cent of the school children in districts like Bethnal Green are backward.
>
> Residential towns like Cheltenham have very few backward cases. Mining and rural areas have, on the other hand, a heavy percentage of backwardness. A high degree of retardation, physical and mental, is observed in new council and housing estates, situated some distance from the centre of employment. High rents or repayments of mortgage, heavy fares and lack of cheap shopping facilities lead to insufficiency of food and other necessities.
>
> It seems that backwardness and poverty go hand-in-hand; that a shortage of the necessities of life lead not only to physical deterioration but also to failure to use fully one's intellectual powers.

CHAPTER III

THE SCHOOL, THE CLASSROOM, AND THE CHILD

Special Classes for backward children—Teaching methods—Conditions in a well-organised school—School functions—Children's interests—Individual studies and class organisation—Health habits—Avoiding failure—Records—Importance of Reading—Speech Defects—The Project Method—Lack of travel—Class outings—"Education Unit" explained—School attendance—Absences and backwardness—Smaller classes in Infants' schools—The Teacher of the Backward Class.

THE IMPORTANCE OF environment on child retardation is discussed more fully in later chapters. Here we are dealing with what can be done in the classroom to improve achievement.

The backward child cannot have a square deal when placed in a class of normal children. The London County Council recognises this, and in its education programme for 1938-1941 has allowed for the establishment of 300 backward classes with a maximum of 30 on roll. These will be known as "experimental classes", and are expected to be conducted in an enlightened manner. In the L.C.C. Inspectors' Report[1] on this it says:

> "The experience gained through experimental classes should in the long run yield valuable suggestions for improving the education of normal or even bright children."

The importance of discovering new methods of teaching is stressed by Professor Gray.

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[1] *Report of a Committee of Inspectors in Backwardness in Elementary Schools.* (P. S. King & Son Ltd.)

"Our existing methods of teaching backward and bright children, and children of different temperaments, help to determine the intellectual efficiency of the population. Modern methods of teaching the calculus enable it to be learned by boys and girls in secondary schools, although only a generation ago it was thought too difficult for any but candidates for university honours in mathematics. This does not mean that teachers who teach calculus to-day are of higher test intelligence than those of thirty years ago, nor that the children who learn it are brighter than their fathers were. What has really happened is that numbers of patient and moderately intelligent expositors have gradually found better means of making the calculus understood. There is no reason why similar improvement might not considerably raise the achievement of individuals now regarded as intellectually backward. The more we know about the interests of children, and the more interesting we can make the things we teach them, the greater will be the return for our educational efforts."[1]

The Conditions sought after in this class are those enumerated for the well-organised school in the pamphlet *The Education of the Backward Child* by the Board of Education:

(*a*) The atmosphere of the school to be cheerful and up to a point strenuous.
(*b*) The children to be studied as individuals.
(*c*) The natural interests of children to be kept constantly in mind.
(*d*) Reasonable freedom of movement, plenty of activity, opportunities for conversations with the teacher and a not too rigid control.

The function of the school is to make the child fit in, and to take his place in the world, and to fend for himself.

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[1] *The Nation's Intelligence*, Professor Gray. (Watts & Co.)

This is an onerous task to fulfil, especially with the backward boy or girl. The backward child is expected on leaving school to increase the national wealth, and therefore he is of great importance to society. His attitude to life is partially made and set in school. Such attitude can be developed through the boy's own inclinations and interests.

A study was made of the interests of the children. The boys drew in pencil what they would like to be when grown up, and they were asked this question orally. Replies showed agreement in both forms of response in eleven out of twenty-five cases. Eight wished to follow father's occupation. One wished to dig roads or alternatively to drive a horse and cart; another to be a pieman; another a lamp-lighter. There were several would-be sailors, policemen, G.W.R. employees and motor-drivers. Of school subjects, 8 favoured arithmetic; 6—writing; 6—reading; 4—drawing; and 1—spelling. Of out-door activities, 8 preferred football; 3—cowboys; 3—"He"; 3—cricket (this questioning took place in November); and 9—other activities. With regard to indoor amusements, 5 liked reading; 3—drawing; 12—various indoor games like Ludo, Snakes and Ladders; and 5—other interests. One replied: "I just sit down."

As a result of the intensive study made of each boy, the work of the class is organised according to his interests and needs. First and foremost, his health is studied, and the formation of regular hygienic habits is encouraged. It is of special importance that the backward child should keep fit. Every morning, therefore, as part of the class routine, a cleanliness inspection takes place. Any aches or pains are reported, and, if necessary, the child is sent to the clinic for treatment. A short period each morning is devoted to physical exercises. Some caution is needed in the amount and intensity of this lesson. More harm than good can be done by vigorous physical exercise to an under-nourished child. Professor Mottram stresses this point. He says: "Any exercise taken on a poverty-stricken diet, depresses fitness rather than raises it." An indication that there is something wrong with many of these boys, is the fact that on a sunny morning or afternoon, during the playtime recess, they sit and loll against the wall, instead of playing or running about. To run about and play would be the natural reaction of a healthy boy after sitting still for over an hour in a classroom.

Providing due regard is observed for the nutritional side, activity in the open-air and ordinary lessons taken out in the open will tend to raise still further the physical level and mental alertness. Physical prowess—in football, cricket, swimming, running and boxing—will do much to prevent an exaggerated feeling of inferiority through weakness in reading, arithmetic and the usual school subjects.

Leaflets issued on Health Subjects are made to serve as material for the reading lesson, and talks on food, with special emphasis on the drinking of milk and eating foods containing vitamins, sleep and fresh air are given.

On the academic side, the work is so graded both in arithmetic and reading that by trying, the child will be able to succeed. This is important if he is to make any progress. *There is nothing which tends to stop development more than the sense of failure.* Any slight progress is noted by the teacher, and due encouragement given the boy. Records are kept of the steps reached in different subjects, and the boys are made to feel that they are getting on.

The class was first labelled "Reading Class", and still reading takes the predominant position. Civilised life of to-day depends on the power of man to read. Our work demands it, and certainly our leisure. Reading opens up a store of new worlds, of experiences of other men and women.[1]

Reading is taught not only formally through a series of graded books, but also by linking up this subject with the child's everyday life in school, home and the street. Signs of the street, dealing with safety instructions, are drawn and read. Notices printed on shops and walls and buses are studied. Each boy is encouraged to read easy books from the Class Library. He is taught to write his name, his address, the date, and to write a simple letter. Daily, a few minutes is given to news. Boys come out in turn to relate anything of note that happened at home or outside school. One of these is selected, written up on the board, and is used for reading, spelling and dictation. Other methods are adopted to make reading a live subject. The children stitch a book as an exercise in handwork, bring along and paste in pictures relating to their own special interests or about their "future occupation", while the teacher prints the word or words relating to the picture. These words the boy learns. The boys, too, draw a picture in pencil or crayon and attempt to write a short description of it. The Head Teacher takes an active part in helping the boys to read. Every day he gives individual tuition to a number of the boys of the backward class. The effect of these co-ordinated efforts is such that *all* boys leaving this Junior School are considered "Readers" on reaching the Senior School.

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[1] Varied reading by the teacher to the class can help to secure the mental attitude which will encourage the slow reader to read more widely and experimentally for himself.

Arithmetic, while not taking up so much of the class time, is taught in a practical manner, related to the child's life. Tables are laid out as a shop, and a pair of scales and measures are used. A boy serves as the shopkeeper, a number of order forms from a large firm are used, and names of articles dealing with different kinds of goods are written down. Symbols like lbs. and pts. are learnt, prices put down and totalled. Processes involving change are also dealt with. The tins and packets of the shop are used for teaching the most backward ones the simple processes of addition and subtraction. Mental arithmetic deals with going shopping, paying bus fares, games of marbles and other interests of the boys.

Writing is taught formally by copying a passage from the board, by writing a fable from a printed book, from a hand-printed card on the special topic or "Project" at the time; and also by tracing and colouring designs based on a letter-form or word-form.

Speech defects are more common among the backward than the normal children. Speech-training practice in carefully chosen exercises of an interesting nature remedies many of the defects.

When the class was first formed, each of these subjects was treated separately from the others. Then as the result of discussions with the Council Inspectors, the Project Method was attempted. This consists of linking up the different classroom subjects around a particular topic. One such Project was based on "The railway train". A play called "The New Locomotive" was rehearsed. Each boy was a part of the engine, and made a noise appropriate to that particular part—Steam hissed, Whistle went "toot-toot", Wheels said "Wheels-go-round". The driver and guard, suitably dressed, had their words to recite, and the engine, as a whole spoke in unison. The Woodwork-Master constructed a set for the hall platform, and as a result of a drawing competition, a boy with artistic talent was discovered who drew a large train and station in crayon, which was fixed by means of a fixing solution. This large drawing pinned to the frame-work formed the background of the classroom. How to tell the time was taught, each boy making a clock face. Railway-time was explained, the importance of punctuality was stressed and a visit to Paddington Station took place. This was a tremendous event in the lives of the youngsters. Most of them had never been as far. A paper hold-all was made, and in it was placed a piece of cardboard to which was pinned some sheets for drawing station scenes and writing words observed on the platforms. The climax was a presentation to the children by the Superintendent of a Centenary Souvenir in the form of an Illustrated History of the Great Western Railway.

The class investigation disclosed a serious lack of travel in the lives of these children. This applied not only to long-distance travel for spending a holiday, but also to short outings. The boys seemed to spend their time in their home and school districts, many of them never leaving the door-step except to go to school, with a resultant paucity of first-hand experiences and real life situations, and, as already shown, in the possession of a very poor vocabulary. We learn and remember best through activities we have ourselves experienced and through things we have ourselves done. It is essential that this shortcoming of lack of movement from the home atmosphere should be made good by the school authorities.

A number of day outings have been undertaken for this class. In connection with the shopkeeping lessons, a visit was made to a Cash Register firm in Marylebone Road. A free ride on a trolley-bus intrigued the boys. The reception by the Sales-Manager was extremely cordial. The boys were regaled with tea and cakes, were shown round the vast building, had a special cinema display and were given some literature on cash-registers. The outstanding new experience gained on this visit was going up a lift to the top of the building. It clean took their breath away. To get to lower floors, they preferred the stairs. Another new sensation felt by them was walking on a carpet. Their expressions and surprised downward looks caused the guide to remark: "They've never walked on a carpet before." This visit also gave the boys an insight into the organisation and running of a factory, thus linking up school with the work of men and women in the community.

Other outings undertaken were to the British Museum, where a guide-lecturer explained the history of the alphabet and the story of books; and to the London Museum, where they had a talk on the development of household utensils. On the way to this Museum a halt was called to watch the changing of the Guard outside Buckingham Palace. A boy of 11 was watching a motionless soldier for a time, when he exclaimed: "Is he real?" The latter visit was one of a series relating to the class Project or preferably "the Educational Unit". This is the more correct term to use, as the method is an extension of the Project system, developing in the child's school life an interest in his own body and personality; in himself as part of his family; and himself as a member of the community around him—his duties to that community and the responsibilities of the various Borough, County and National Organisations to him. This method of teaching is fully explained in *The Education of the Slow Learning Child*, by Christine P. Ingram, published by Harrap & Co. Ltd.

One Educational Unit was based on a trip round the kitchen. This covered lessons on food and health, utensils, water and sink, cooking and other domestic matters. The commonplace was made interesting and vivid, and a new outlook given the child. One lad drew a large picture, in sections, of a kitchen, called "Home, Sweet Home", which was pinned up to the stage set, at the back of the room. His mother and father came up to the school to see their son's work.

In addition to the London Museum visit, a large milk-bottling factory in Scrubs Lane was inspected, and future visits will include the farm of the London Co-operative Society at Ongar. Assistance from the local Borough Council has been forthcoming in explaining to the children the part played by that Authority in maintaining the health of the people.

SCHOOL ATTENDANCE

The attendance of the boys in the Backward Class is carefully observed. Every effort is made to secure regularity, in order that the educational sequence shall not be broken. An absence of only a short duration may mean the missing of an important process in a particular subject, and unless the teacher repeats the lesson to the boy on his return, further retardation will take place. Miss G. Rawlings, B.A., who conducted an investigation among the children of Bradford, reports:

> "It is during the Infant School years that the longest consecutive periods of absence through illness usually occur—that is to say, these absences occur just when the child should be normally covering the groundwork of the fundamental subjects—reading and number. If such absence occurs, individual help from the teacher is

necessary to make up the points missed, otherwise hopeless confusion may set in and a 'backward case' formed."

It is, however, very difficult for a teacher with about fifty infants in a class to give such individual attention, hence the urgent necessity for reducing numbers in the Infants' Schools.

An inquiry into the effects of short and long absences on school progress was carried out by Frank Sandon and reported in the *British Journal of Educational Psychology* (1938, Volume 8). He studied the absences of about 150 boys in a secondary school throughout a year.

He found that the school records of those who had not been absent at all during the previous terms were the most satisfactory. But it was observed that frequent short spells were more closely related to educational retardation than the less frequent longer spells of much greater total duration.

Dr. A. H. Whipple, M.A., D.Sc., Director of Education for the City of Nottingham, conducted an experiment in a park. Four open-air classes were organised for normal healthy children. He found that the attendance of such a normal class was 94 per cent for the year while the school of which the class formed a part reached an attendance of 90 per cent under indoor conditions. Scholastic results improved, and in the case of the backward children, the better their health, the less evident was their retardation.

An analysis of the attendance for 1937 of the class being discussed, showed an average of 86.4 per cent. Of the 26 boys, 1 made below 60 per cent of possible attendances; 1 between 70 per cent and 80 per cent; 6 between 80 per cent and 90 per cent; and 18 between 90 per cent and 100 per cent. Illness, "no boots", unsuitable clothing for wet weather, illnesses of mother, "looking after baby", and a slight amount of truancy, account for absences. A school Boot Club, attendance at the Medical Clinic, and generally making school attractive, are considerably improving regularity. An extension of school feeding, and more opportunities for spending periods in the country, would increase resistance to illness, and would be of still greater benefit in reducing frequent breaks.

Only increased real wages will raise the low level. In the meantime it is necessary for the school to note any deficiencies in the physical and cultural life of the children, and to make these good where possible. A hot-water supply is wanted in schools in poor neighbourhoods to raise the standard of cleanliness. To prevent backwardness, a child needs to be guarded most particularly in the youngest years of life. Nursery schools and classes are essential for all children, but more particularly for those of the poor. While a general reduction of a maximum of 30 children per teacher is to be advocated, immediate strenuous efforts should be made to secure a reduction to this number in the Infants' Schools first. It is to be regretted that the proposed reduction of the size of classes in junior and Infants' Schools by the L.C.C. has not met with the approval of the Board of Education.

Teaching should provide less of the passive type of lesson at which the child merely sits and listens, and give more opportunity for the child to "do" and to "make". Matter taught should relate to the child as a unit of a larger world outside the school. The health of the child should be watched and brought to a maximum standard by supplementary school feeding and other measures. Open-air work and organised journeys to places of interest nearby and to the country and seaside are necessary.

Both the L.C.C. and the Board of Education reports on Backwardness stress the importance of carefully selecting the teacher who is to be in charge of the Backward Class. Dr. Burt advocates a man or woman who has an interest in human nature, who will be interested in the lives of the pupils outside school and will cultivate a human and scientific attitude to each one. Mr. Duncan in *Mental Deficiency* (Watts & Co.) urges the removal of the marriage ban on women teachers.

CHAPTER IV

HOME ENVIRONMENT

Types of homes—Occupations of parents—Size of families—Inside the homes—Income and mental development—Income and emotional disorders—Family income—Employed Worker—Unemployed—"Influence of the growing family upon diet"—Birth-control information—Housing and mortality—Rent and food—Slums and deafness—Relaxation—Sleep—Verminous homes—Effects of poverty—Essential remedies and recommendations.

Of the homes of this Backward Class of school children, nine live in the old tenement houses adjoining the school, fourteen live in newly erected flats, one in a Council house and two occupy modern houses built by the G.W. Railway. Most of the families of these boys now living in the flats, formerly occupied basements or lived in overcrowded conditions in the houses around the school.

The area by the School was scheduled as an "Improvement Area", and undoubtedly the Borough Council has improved the district. Unfit basement dwellings[1] have been cleared, the people displaced were rehoused, and overcrowding generally eliminated. The effect of the improvement was to reduce the population in this area by about 20 per cent. It would be better to declare it a "Slum Clearance Area", pull the lot down and build modern flats with lifts and hot water supply at rents commensurate with the incomes of the families that would be rehoused in them.

Occupations of parents show that the families concerned in this investigation are typical of other sections of the working class and cover a wide range.

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[1] These basements are now (Spring 1939), being re-opened, after structural alterations.

Father Occupation	No. of cases	Mother Occupation	No. of cases
Driver (lorry or cart)	6	Charring	3
Labourer	6	Laundry	2
"Scrap iron"	2	Flower seller	2
Flower seller	2	Hospital orderly	2
Painter Builder	2		
G.W. Rly. fireman	1		
G.W. Rly. driver	1		
Scale maker	1		
Dustman	1		
Window cleaner	1		
Baker	1		
Maintenance man (flats)	1		

Seven of the men were unemployed.
The father of one boy was dead.

Children on the roll of the class now being described were questioned as to the size of their families—

Size of household	*No. of families*	*Size of household*	*No. of families*
3 persons	2	7 persons	4
4 ,,	6	8 ,,	2
5 ,,	4	9 ,,	1
6 ,,	6	10 ,,	1

There was an average of six persons to a family, or four children per family. One boy, when asked how many children there were in his family, answered: "Four, and Dad says he's not going to have any more."

Teachers, who should be concerned with the child's home life, live naturally some distance from their work if this is in a poor district. Many do not know what is beyond the front door of the slum homes in which their children live.

Let us peep inside the houses of some of the twenty-six boys. In putting the overcrowding regulations into effect the Borough Council instructed one family to rent another room in the house. This they did but could not use the room because there was no spare furniture, nor the wherewithal to buy any. In the kitchen of one set of rooms, where the father was out of work, were some broken chairs and a plain deal table. The father, grandfather and boys were playing darts, In another house lived a family of nine, occupying four rooms and a kitchen. The father was injured in the head during the War, mother suffers from rheumatism, one boy had been to a reformatory school, another was attending a special school and one of six years of age was suffering from pneumonia at the time of the inquiry.

The next case is of a family which until three and a half years ago lived in the Channel Islands. Circumstances forced migration to London. There are five in the family, and they have lived for two and a half years in a London basement under a shop. Since their removal from a healthy home to a basement, the boy has had measles, mumps, and now suffers from regular attacks of chorea and croup. He has not grown in the last three years.

In the case of "E", the father objects to him reading at home, "as he has enough at school". The father says he himself learnt nothing at school, and picked up education on leaving school. "K" lives in a well-furnished flat; the furniture was being bought on the Club system at the rate of 5*s*. per week. The father, a painter, was unemployed, but a son at work allowed his parents 16*s*. per week. "M" is an only boy. Mother used to cry when her husband (a motor-driver) first fell out of work. Now she has given up worrying if he has no job. "N" lives in a basement with his grandparents. When asked about his health, he replied: "I'm always getting ill." "O" suffers from nervous twitchings, a result of diphtheria. Mother had a nervous breakdown and could not walk for a year. She is physically disabled through child-birth. She complained of the noisy flat above. Father suffered from shell-shock during the War. "Q" lives in a mews over a stable. The home of "S" is overcrowded and the family's name is on a special removal list waiting for a Council house. In the case of "X", where father is a railway driver and the brother is an engine cleaner, the family of four have a three bedroomed house, well-furnished, food is good. The boy is taken to the West-end shops at Christmas. At "Y's" flat of three rooms and a kitchen, there were eight in the family, the children's ages being 10, 9, 8, 4, 2 and 1 years. They were poorly clothed and puny. Too much went in gas and coke, approximately 8s. per week.

Some evidence has already been given to show that the economic circumstances of a family are the greatest factor in determining the mental development of a child. The Senior Medical Officer for Preston (Lancs.) in his 1933 Report, remarks:

> "The results of malnutrition are widespread. In the districts where unemployment is most marked, the results of poverty are very definitely reflected in every class in the schools. Taken as a group, the children are undersized, pale, listless, and mentally dull. When a school in a district such as this is compared with one in a well-to-do residential area, the contrast is striking. The educational level in the poor schools is lower, and the teachers have to work harder."

Besides Bethnal Green, already mentioned, among other parts of London with a 20 per cent incidence of backwardness, are North Lambeth, Southwark and Shoreditch. Among the Boroughs with only 1 per cent of backwardness are Putney and Lewisham. Professor Burt has prepared a map of educational level throughout London. A comparison of this with the economic map of Charles Booth verifies the statement that poverty and backwardness go hand-in-hand. It has also been established that a high index of backwardness occurs in areas having also a high rate of infantile mortality. Many children of the poor that survive suffer from defects of malnutrition and intellectual deficiency.

A state of emotional disorder, which may be set up in the homes both of the poor and of those more comfortably placed, often leads to retardation. Unemployment, insufficient income to make ends meet, anxiety brought about by economic instability, fear of losing one's job, may lead to bad psychological adjustment in the homes, involving continual friction, a sense of frustration, and a nerve-racking sense of living on the brink of disaster. A child to make satisfactory physical and mental progress not only needs food and warmth, but also affection. He must feel that he is wanted. Further, he needs the companionship of other children. This applies more so to the only child, and is of primary importance in early infancy—hence the great need of Nursery Schools which provide playmates for children from two to five years of age.

In a home in which there is economic security, the child has every advantage to learn in a natural way—from toys, picture books, travel, conversation, answering of questions by parents whose minds are at ease as compared with the poor parent, visits to shops, amenities in the home such as a well-equipped kitchen, table nicely laid, comfortable bedroom and a garden. A child brought up in such an environment is ready to digest the more abstract knowledge given him at school.

FAMILY INCOME

Home environment is dependent on income. Mr. Rowntree worked out for 1938 a budget for a family with three children. In *The Human Needs of Labour* (Longman's) he provides what he declares to be a rock-bottom minimum, "below which no class of worker should be forced to live." This he says is £2 13*s*. per week. There is no allowance in this figure for recreation, education, fresh milk and butter, or special requirements of nursing mothers, or the sick.

According to the economist, Mr. Kuschinski, in his book *Hunger and Work* (Lawrence and Wishart) ten million men, women and children of the working class in this country are living on incomes below the Rowntree minimum. All agricultural workers, four coalminers out of five, half the builders and textile workers, one out of every four railwaymen, secure a wage below this minimum. The three railway trade unions are presenting a claim to the companies for a minimum wage of £2 10*s*. per week for adult workers.

What kind of a home or what degree of culture can be secured with such an amount when there is a family to house, feed and clothe? The results are appalling poverty, semi-starvation and disease. Experiences must generally be strictly confined. A background of this kind must lead to low intelligence and slow learning. Mrs. H. Chodak Gregory, M.D., F.R.C.P., speaking to the Child Study Society (Christmas, 1937), ended her address by saying this:

> "(1) The backward child is not always innately deficient but is made so by environment and disease;
> (2) When he is innately deficient, he can always be improved to some extent;
> (3) Conditions for his improvement must begin in earliest infancy, or we are never likely to get the best results."

It has been shown how poor the manual worker in full employment lives. What kind of an existence does the unemployed family endure? The scale under the Unemployment Assistance Board is:

	s.	*d.*	
For a married couple	24	0	per week
,, child between 14 and 16	6	0	,,
,, ,, ,, 11 and 14	4	6	,,
,, ,, ,, 8 and 11	4	0	,,
,, ,, ,, 5 and 8	3	6	,,
,, ,, under 5	3	0	,,

If there is only one child in the family, then not less than 4*s*. is allowed.

The London County Council acts as the Public Assistance Committee for London. Its scale is:

	s.	*d.*	
For a married couple	18	0	per week
,, ,, ,, and 1 child under 10	22	0	,,
,, ,, ,, and 1 child over 10	23	0	,,

and 3*s*. for each further child under 10; and 4*s*. if over 10 years. Rent can be paid in addition in full by the P.A.C. Extra winter fuel allowance is 2*s*. per week. Additional relief may be granted for extra nourishment to sick persons, expectant and nursing mothers. Extra allowance is granted at Christmas time and for special circumstances.

It can be left to the reader to imagine, if he is not suffering or has not suffered a spell of unemployment, the kind of physical comforts, the level of culture, that can be enjoyed under such economic conditions. It is difficult, however, for imagination to stretch so far.

The unemployed are not prepared to suffer in silence. In the present winter of 1938 to 1939, they are staging a series of protests calculated to attract the notice of the public to the meagre allowances, and asking for extra winter relief. Among their actions were—lying down in the snow in Oxford Circus; entering the Ritz and demanding tea; presenting a petition to the King; and unfurling a huge banner at the top of the Monument with the words: "For a Happy New Year the unemployed must not starve in 1939."

The employed worker, too, is constantly agitating for better pay and conditions; but output per man has risen faster than his wages, and profits have risen faster still.

The low standard of life among workers of this country may be gauged from the following scale adopted by Dr. Fraser Brockington, Medical Officer for Horsham, who represents the minimum expenditure on the following as being—doctor's services, 1½*d.* per week for non-insured persons; replacements, 1*s.* per week per family; clothing, 1*s.* 3*d.* per unit of family per week; and lastly and of particular significance, 1*s.* per week for each adult for private use.

On the size of the family depends (1) the number of rooms to be occupied, (2) the rent, (3) the amount left that can be spent on food and other necessities of life. Dr. Fraser Brockington carried out an investigation on the "Influence of the Growing Family upon the Diet". A summary of his findings are here given:

(1) The weekly budgets of eighty out of ninety-nine families in four rural schools, and ninety-seven out of 200 families in one urban school, have been analysed.

(2) Evidence is given that housewives, despite varying social status, spend between 9*s.* and 11*s.* per man per week on food when the income is sufficient to allow this.

(3) The lowest level of sufficiency in diet, according to the instincts of the housewife, correspond, at prices ruling in this district in the winter of 1936-7, with the cost of the diet of the British Medical Association Nutrition Report, that is 7*s.* 2½*d.* in 1938. This has been called Standard A. Standard B costs 5*s.* 10¾*d.* per adult male, and contains 1,000 calories and 13 grams of first-class protein a day less. Standard B is probably the lowest standard of diet which any authority would be prepared to recommend.

(4) In the school in a prosperous urban district, among working class families (income not exceeding £4 per week where the children were fully embarked on the school period, i.e. the eldest child over 7 years but no child yet earning more than 10*s.* weekly, and which contained more than one child), 60 per cent of children fell below standard A and 47·6 per cent standard B.

(5) In the rural schools taking all the children,
72·2 per cent were below standard A where there was an income below 55*s.* per week.
78 per cent fell below standard A with an income below 50*s.* per week.
85 per cent fell below standard A with an income below 40*s.* per week.
91·7 per cent fell below standard A with an income below 35*s.* per week.
The figures below standard B were 40·6, 52·4, 60 and 75 per cent respectively.

(6) Both in urban and rural families, with the exception of high income groups (e.g. farmers), increase in the size of the family steadily lowers the allowance of food per unit. In medium wage-earners the allowance of 9*s.*—11*s.* per week when the family is small,

is reduced to about 3*s*. when the family grows to a large size and before the first children begin to earn.

(7) Most significant is the decline in the provision of first-class protein foods both in town and country in proportion as the family grows. Evidence is given that this contrasts markedly with the recognized needs of growth in childhood, and it is clear that in both town and country the large family in low wage groups produces a condition of extreme protein deficiency. Accepting 2*s*. per unit per week as a conservative estimate of the minimum expenditure upon first-class proteins, 13·2 per cent of the school children in the urban school and 32·7 per cent in the rural schools were subsisting on amounts suggesting protein deficiency.

Where extra children are born to a working-class family, it does not follow that there is any increase in the wage-earner's packet. It does follow, as has been shown, that all others in the family do with less, resulting in further deterioration. Until a new social order aims at using all food for the people, and until the destruction of food for the purpose of causing a shortage and forcing up prices and profits becomes impossible, we should try to compensate by providing full birth-control information. Such knowledge might be given in the Maternity or Child Welfare Clinics.

Bad housing conditions are reflected in the mortality rate. In Kensington, 83 children out of every 1,000 died before the age of 12 months in 1937. For London as a whole the infant mortality rate was 60. While it must be recognised that the Borough Council is aware of the seriousness of these figures, far more drastic action is necessary to reduce the serious loss of lives. As has already been mentioned, where there is a high infantile mortality, there is also a high percentage of backward children. In a letter, Dr. Gregory Chodak writes: "I am entirely with you on the subject of proper diet, but I think you might make even more of the housing question. In my experience, bad housing, want of light and air, etc., produce such diseases as rickets even more surely than an inadequate diet."

A reduction in the rent paid is of paramount importance and would lead to more spending on food. The *News Chronicle* in August, 1938, reported visiting a resident of Quinn's Buildings, Bethnal Green, where the tenants refused to pay their rents until these were reduced to a fair standard. It stated:

> "A woman was washing-up at a common sink, her only light coming from the window in a common lavatory. Within three feet of her was the door of a rubbish chute used by 28 families. But she was singing cheerfully.
>
> "'What's put heart in us,' she said, 'is the good meat, eggs and milk we've been able to eat from the saving in rent.'
>
> "The families put what they consider the correct rent into postal savings accounts weekly against the time when the strike is over."

It would also be worthy to note the findings of the Glasgow Medical Officer for Health. He records figures for boys and girls, showing their average heights and weights, and the conclusion he reached is that the larger the number of rooms occupied by a family of a given size, the heavier and the taller are the children. Dr. McGonigle of Stockton-on-Tees and Dr. Cole of Beckenham show that this does not hold good when rent is disproportionately high.

The importance of abolishing slums so as to combat deafness is stressed by the Board of Education in Administrative Memorandum No. 182 (H.M. Stationery Office).

The decline in the volume of deafness is due to two causes —prevention and improved methods of treatment. Since "running ears" are often the aftermath of the common infectious diseases such as measles, scarlet fever, influenza and the common cold, measures taken to prevent these or to minimise the secondary infections which complicate them are suggested. When resistance to disease is lowered by poor feeding or bad environment, then otitis, like all other complications of these diseases, occurs more often and is more difficult to cure. The Memorandum continues:

> "Every improvement in hygienic conditions, in ventilation, in eliminating overcrowded, poor and damp housing, will diminish the incidence of otitis media. Every slum and overcrowded tenement abolished, every unhygienic school rebuilt on open-air lines, is a step towards this end."

The efficient working of the brain is also closely related to adequate bodily relaxation obtained through sleep. No reliable information was obtained in the enquiry as to the time at which the children went to bed, but a walk round the district, particularly in summer, showed that they go to bed at a very late hour. This means sleepiness while in school, inattention to lessons and lack of progress. An admirable leaflet was recently issued by the Public Health Department of the London County Council, called "Sleep!" It was issued to all London school children. It begins by quoting Kipling—"Sleep and grow strong and you can't be wrong." Here is the rest of the leaflet.

> "GOOD FOOD. FRESH AIR. RESTFUL SLEEP.
>
> "These are the three main things your child needs for health. Without the last the first two are largely wasted.
>
> "During sleep a child is building up reserves of strength in body and mind. He is not wasting time, but using it to the best advantage to refresh himself for active work and outdoor exercises and games next day.
>
> "Summer time is a blessing to grown-up people

because it has extended the hours for healthy outdoor recreations. It is not so good for the children if they stay up and lose the rest they need.

"The king who first ordered the curfew was a wise man. The mother who has a curfew hour for her young ones is a wise woman.

"Bedrooms should be dark but airy; and

"Bed-time should be early and strictly observed.

"Essential hours of sleep and times to go to bed are:

12 hours at 4 years old	6.30 p.m.
11 to 12 hours at 5 to 7 years old	7.0 p.m.
10 to 11 hours at 8 to 11 years old	8.0 p.m.
9 to 10 hours at 12 to 14 years old	8–9.0 p.m.

"Remember that doctors and teachers agree that:

"Late hours mean tired pale-faced children, drowsy in the morning and cross in the afternoon. They make children dull at lessons, half-hearted at games and irritable at home.

"Early hours mean rosy cheeks, liveliness, keenness at school, good temper and good appetite.

"Even if the child doesn't feel sleepy at the right time, he can be resting and forming a good habit instead of a bad one.

"Don't let your children suffer from sleep-starvation. Give them the best conditions for sturdy and healthy growth, and put them to bed every night in good time."

Knowledge and advice are very useful and necessary, but conditions have to be provided for carrying them out. Among the causes of inadequate sleep among the children of the poor are—more than one child sleeping in a bed; an uncomfortable bed; being disturbed by older people going to sleep at a later hour; too much light and noise; and in hot weather—vermin. In old houses in slum districts, bugs are the greatest preventative of restful sleep. In Kensington, the Medical Officer in his Report of 1937 gives the following figures:

	Verminous houses cleaned	311
	,, rooms cleaned in such houses	585
	In addition, dirty bedding cleansed	89
	Dirty bedding destroyed	27
Also:	Naphtha. treatment of premises	373
	No. of rooms in such premises	1,069

Residents were re-housed while these processes were being done.

On top of these figures there are also under the heading of Slight Infestations reported—494 houses containing 832 rooms.

It would seem that in elementary schools in poor areas all children, not only those in nursery classes, would benefit by a period of rest and relaxation in the afternoon at school.

Professor Burt sums up the effects of poverty. Poverty impairs health and limits general knowledge. Low physical vitality diminishes capacity to learn. By restricting the mental horizon, the children are deprived of a background of worldly lore and culture that most schools take for granted. Efficiency of the mind varies with the state of the body. Full working order cannot be maintained if deprived of proper food, proper clothing, proper housing and sleep. Poverty leads to a perpetual state of ill-health. Little money coming into the home means poor food, too little living space, poor furnishing and table equipment, lack of books and newspapers, and little travel. There is no stimulus for progressing to a higher level. This further results in low economic status. There is thus a vicious circle which needs to be broken.

The impressions gained by visiting the homes of the children at this school and by discussing housing conditions of workers in general were:

(1) Those who live in the old large houses just around the school are in a far worse environment than those in the new blocks of flats. There is more overcrowding in the former, and generally the sanitary conditions and state of repair are bad. This area might well be considered a slum clearance area.

(2) The blocks of flats provide greater space per family. In one block, the residents complained of dampness. In another, where the only fuel that could be used was gas and coke, and where only gas might be used for lighting, too much money went on lighting, cooking and heating.

(3) Lifts and constant hot water supply in working-class flats should be considered necessities and not luxuries.

(4) While the London County Council and many Borough Councils are doing commendable work in rehousing, even greater efforts are necessary in speeding up the wiping out of slum areas.

(5) For purposes of overcrowding, the law needs revision. Kitchen or living rooms should not be included in calculating sleeping accommodation.

(6) The Housing Act of 1936, prohibiting the use of basements for human habitation, is to be welcomed. This provision becomes effective this year—1939.

(7) Rent forms too great a proportion of the family income.

(8) A staff of sanitary inspectors should be engaged by Borough Councils to inspect regularly houses in their area with a view to maintaining a high standard of repair and sanitation.

(9) Constant struggle is necessary by employed and unemployed workers through trade union and political activity to secure improvement in their economic conditions.

(10) The extension of Tenants' Associations is advocated to keep the rents of decontrolled houses down to the controlled level and to secure necessary repairs.

CHAPTER V

DELINQUENCY AND LEISURE

Incidence of backwardness and delinquency—Cases—Manor House (Middlesex) Remand Home—Causes of child delinquency—Need for children's leisure organisations—Woodcraft Folk.

There is a very close relationship between backwardness and delinquency. Dr. Cyril Burt, in the *Young Delinquent* (Univ. of London Press), states that 80 per cent of the cases investigated were dull and backward educationally, whilst it should be remembered that only 10 per cent of London School children are placed in that category. Another figure to illustrate this is given. Of 3,000 juvenile police-court cases examined, 40 per cent were seriously retarded in reading. Miss Marion Whyte, B.A., speaking at Gloucester last year, said:

> "Organised classes of backward children would catch in their meshes 70 per cent of our incipient criminals. Crime is due to psychological maladjustment, and this is due to the outcast feeling of the backward child conscious of his inferiority to normal children."

Dr. William Moodie, of the London Child Guidance Clinic, contributes the following report of a tragedy that was averted:

> "Boy, aged 12 years. Referred by Probation Officer.
>
> Problem: Unable to read; delinquency (stealing); on probation for two years.
>
> History: Family poor. Much illness. Father out of work, on relief. Mother delicate.

The Patient: Poor health; still attending hospital. Placed on probation for stealing. No behaviour problem at home; easily led. Mother's "special" boy—always ready to help at home. Terrified of being sent away from home because he could not read.

Conference Findings: The boy lives in a very poor home. Much of his ill-health is imaginary. His backwardness at school, as compared with others of his age, gives him a feeling of inferiority. This is the real problem; the delinquency is not important.

Treatment Planned: His reading being that of a child of four, special tuition to be given to remove educational handicap and give self-confidence.

Result: The boy started his special coaching at the Clinic December, 1935, and continued until July, 1936. At the end of this period his reading had improved to that of a child of eight years. More self-confidence. No return of delinquency. Encouraging report from L.C.C. School."

Case D in the class is interesting on account of his tendency to steal and particularly to steal food. He was in this class because of being three years backward in reading, although he was normal in intelligence. His father was away from home, and the mother was struggling to keep the home together. There was a clean tidy flat for the mother, boy and girl. Of all the homes visited, this was the most cultured from the point of artistic curios, pictures and books. The mother was reading at the time of the visit *Stories from the Operas*. The boy's state of nutrition was low. He was getting school dinners. He was a premature baby, and at two years had measles, at four chicken pox and later whooping cough. He suffered regularly from colds. He was caught smoking (his age was 9½ years). He was clean in appearance but small. As mother leaves early for work, he and his sister get their own breakfast. His attendance was 97 per cent for 1937. Mother had him transferred from his previous school as he had "learnt nothing there". For three weeks, he had kept 2*d.* a day, given him by his mother to pay, as she thought, for school dinners, which, however, he was getting free. He spent the money on sweets. On one occasion he tried to steal a box of chocolates from the headmaster's room, but was caught by the school-keeper, whom he threatened to stab with a knife. In December last, he was accused of stealing a box of cheeses from a teacher's cupboard.

As the result of treatment, the boy has greatly improved in reading, and has been promoted to a higher normal class where he is working well. He needs direction and opportunity for expressing his spirit of adventure in rightful channels, sympathetic handling and understanding, and a sufficiency of food.

Harry's mother came to school one morning and asked for a good word to be put in for him.

"What's the trouble?" asked the writer.

"Oh! the police have got him. Tom and Dick took him to Willesden Green last night. Whilst they clambered into a jeweller's shop through a skylight, Harry waited outside. They handed him some watches. A police-car drove up. The policeman stepped out and asked Harry why he did not go home. Harry said he did not know the way. The policeman asked how he had got there, and Harry said his two mates had brought him. 'Where are they?' was the next question, and Harry said, 'In there!'" The three boys found themselves in the hands of the police.

It is not to be wondered at that the Board of Education in its pamphlet on Backwardness writes:

> "The social value of the work (the teaching of backward children) as a means of combating a dangerous source of delinquency is one that cannot easily be assessed."

Dr. Mary K. Ruddy, M.D., reported in July, 1937, to the Middlesex Education Committee on the Manor House

Remand Home. This report is full of interesting matter, and much of it is worth quoting. She relates that in the first six months of the Home's existence, 220 boys found their way there, their ages ranging from 8½ years to 16 years 10 months. They stayed in the Home for periods varying from one night to four months. As a group, these children were considerably below average in physique and mental ability. Those who were fortunate enough to remain in the Home for a fairly lengthy period showed to a striking degree the beneficial effects of a good supply of food of an appropriate kind, and regular hours of work, play and sleep. It is difficult at times to abandon the idea that certain charges were rather hardly brought, as for example in the instance of a boy of a very sub-normal intelligence given to spending a good deal of his time standing about in a vacant way, who was charged for "loitering, with intent to commit a felony"; or yet again that of a child of nine, arrested for drinking a half-pint bottle of milk from a doorstep, after carrying out a lengthy paper round in the early morning; and perhaps even more so, in the case of a youngster of ten made responsible for the provision of butter and milk required by the impoverished household, the alternative to default in this respect being that he should remove himself from the paternal roof—a threat which a child is apt to regard as by no means an idle one.

Above all things, a consideration of the cases under review by Doctor Ruddy points very forcibly to the need for a much closer investigation of the home circumstances of the delinquent child than is at present carried out. She continues her report by saying that the most serious delinquencies in the way of house-breaking and theft are very often the outcome of a long series of minor offences. Frequently these children in their homes are at grips with antagonistic forces which it is wholly unreasonable to expect such immature personalities to combat. These cases are extremely difficult to deal with, since they are caused far more by lack of sympathy and affection, and the constant atmosphere of domestic conflicts, than the more obvious factors of poverty and unemployment. A child may steal a bicycle or tools because he is without the money to buy them. Given a fair chance, he has at least the opportunity to establish himself in later life, in such a way, as to be able to provide himself with those legitimate wants, the lack of which he feels so keenly at present. But the child, who lives in an atmosphere of being unwanted or in unsatisfactory surroundings, or whose parents treat his youthful misdemeanours as the grave default of an adult, and betray him to the outside world by calling in the law to deal with him, finds that the attitude of his first social milieu is a hostile one. He is very likely to give back what he has received by developing into an anti-social being.

The Doctor of the Manor House Remand Home records that the subnormal level of intelligence among these boys also renders them peculiarly susceptible victims for getting into trouble. Their subnormality shows itself very largely in their poor academic attainment; hence it is much more difficult for them than for the normal boys to enlarge their minds to take an interest in the outside world, and develop hobbies and interests. Reading is too halting to be anything but a labour, and its subject-matter has very little meaning in relation to experience. Consequently interests requiring the power to read are pushed on one side, and recreational activity becomes limited to the cinema and football. Any amusement which offers variety is eagerly seized on, and an escapade demanding recklessness or dash holds an irresistible attraction. The growing boy needs a model on which he may mould himself with a feeling of affection and security. If his parents have never won his affection, or more seriously have alienated it, he may be attracted by some more exciting model, whose notoriety merely reflects conflict with established social standards. Faulty environment, lack of opportunity, misplaced affections, betrayed confidences, which rise from social injustice and domestic error, are cheating these children of the means by which they may develop to the full dignity of their human stature, and thereby know the joy of living generously in the love of their neighbours.

Why do poor children so often find themselves in the hands of the police?

The question is asked by the Middlesex County Medical Officer of Health. He unhesitatingly gives us the answer—overcrowded homes and lack of opportunity. "Where there is little money," he says, "the mother becomes an automatic drudge, weary and disheartened by household cares. The father, after the day's toil, has little energy to spare for the home. Where the home is overcrowded and cramped, the children have to seek amusement as best they can by the wayside. Bird-nesting and living as an outlaw in the good old way of Robin Hood are closed outlets to the adventurous boy who lives in the town. In their stead, petty pilfering from cars, sleeping in sheds and forbidden premises, running from home and seeking to make life alone in a sophisticated world full of temptations, must serve for the living out of fantasies created to escape the monotony of life. Fantasy is a normal part of every boy's development. The fortunate can enact their fantasies in innocent ways."

How to satisfy this love of adventure, the need for being helpful to one's fellow man, to give free play to a child's fantasy—is a problem that has to be tackled if children are to be led aright, and to become useful members of society. In this particular school, there are homework classes on two evenings a week, and a cinema show every Wednesday. On summer evenings cricket matches are played with neighbouring schools, and in winter, on Saturday mornings, football. A school journey is also undertaken every year.

There is need for all children to take part in a larger movement such as is provided by the Boy Scouts, Girl Guides, Lads' Brigade and Clubs. The Woodcraft Folk, associated with the Co-operative Movement, would probably best fit in with the views of many parents. The guiding aims of the Folk are the love of nature, the brotherhood of mankind, peace between all nations through collective security and the League of Nations, and faith that democracy by raising the level of life, will lead ultimately to a world of co-operation for the good of all, in place of our world of exploitation and profit.

The green costume is the symbol of the simple life of the countryside, and stands for adventure to the town child. Wearing it, gives the young ones a feeling of comradeship and joint effort. The weekly meeting is devoted to handicraft, dances of all nations; round the council circle; talks on current affairs—all leading to the desired aims and to preparations for the week-end and holiday camps. Fantasy is fully provided for. Each child on joining the Folk is placed in a Group according to age, such as Elfins, Pioneers and Kinsfolk. Each child chooses a Nature name as Whitecloud, Trapper, Red Deer or Hazel. Every year a holiday camp is held in this country, while every two years an International Camp is organised and held in other countries. Last year, groups assembled at Rottingdean near Brighton, next year the Camp is due to be held at Liege, Belgium. A further advantage of the Woodcraft Folk is that it is mixed for boys and girls and there is no segregation as in the Scouts' and Boys' Brigade.

While a great deal is being done to understand the causes of delinquency in children, this will only generally disappear when the main causes are removed—low economic standard of life, overcrowding, lack of food and constructive toys, and the limitation of natural childish desire to be active. Children develop best not only in sunlight, but in the sunshine of encouragement and love.

CHAPTER VI

MOTHER AND CHILD

Intellectual expression and material state of the body—Social class and mortality—Breast feeding and mortality—The child before birth—The pregnant mother—Free dinners and milk for mothers—Malnutrition and the future mother—Maternity and Child Welfare Act.

IN SPITE OF the recognition in the Education Act that educational progress is directly related to physical efficiency, the training of the mind still seems to be the chief concern of schools; and the relationship of the mind to the body generally disregarded. There is overwhelming evidence that the degree of intellectual expression depends directly upon the material state of the body. Dr. A. F. Tredgold states that:

> "The essential basis of amentia (the state in which the mind has failed to attain normal development), is an imperfect or arrested development of the cerebral neurones (nerve cells of the brain), a fact which is now established beyond doubt by careful microscopical examinations conducted by numerous competent observers."[1]

Henry Collier adds to this:

> "Thinking is part of the activity of the brain; the brain is the most complex form of nervous tissue. Therefore, even the subtleties of thought and feeling are dependent on the material conditions of the brain. Human thought is affected by minute quantities of certain chemicals. Gutt-

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[1] *Mental Deficiency* (*Amentia*). (Bailliere, Tindall and Cox.)

> man and Sargant have just reported that one two-thousandth part of the drug 'Benzedrene', when swallowed, increases a man's confidence, initiative, and ease in making decisions, and speeds up the thinking process without impairing attention, concentration or judgment."[1]

This drug is dangerous, if taken repeatedly, and leads to an impairment of health.

There are many other chemicals which affect the human mind, some are poisons, while many are made in our own bodies in small quantities and help to regulate our behaviour. If a child has defective thyroid glands, then administering thyroid extract will cause an increase in the child's intellectual powers.

General physical growth, and with it the production of these very necessary chemicals in the body, depend on the material condition of life, and they in turn determine the state of health, of intellectual level and behaviour.

Dr. H. M. Vernon in an article on health and occupation in the journal *Occupational Psychology* (January, 1939), says that social environment is one of the main factors influencing health. That this is so is suggested by the mortality table of the Registrar-General's classification of occupational groups according to social class, 1930-2 (published in 1938).

Social Class	*Standard mortality ratio of*		*Deaths of infants per 1,000 births*
	All males	*Married women*	
I. Professional, etc.	90	81	33
II. Intermediate between I and III	94	89	45
III. Skilled workers	97	99	58
IV. Intermediate between III and V	102	103	67
V. Unskilled workers	111	113	77
Per cent excess of V on I	23	40	133

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[1] *An Interpretation of Biology*. (V. Gollancz Ltd.)

It will be observed that with the decrease in economic resources there is a marked increase in the mortality of men, women and children. The influence of social environment appears to be shown even better by the mortality ratios of the married women. Only a tenth of these women were "gainfully occupied", the remainder being mostly dependdent on the earnings of the husband. We see that they showed a greater rise of mortality than the men on passing from Class I to class V. Even more striking are the differences in the mortality of the infant offspring. It will be seen from the table that their death rate rose very rapidly from class to class, that of class V being 133 per cent greater than that of class I.

The economic factor is more important than any other in influencing social environment, points out Dr. Vernon. Upon it depends the standard of housing which a man and his family can afford; their expenditure on food, clothing, fuel, light and household sundries, on medical treatment and insurance, and on amenities such as hobbies, recreations and holidays.

Of all the factors which may conveniently be included under the term "social environment", nutrition is by far the most important, for it affects every member of the family throughout life. The younger the child, the more does it react to nutrition; so it follows that it is particularly affected by the nutritional condition of the mother during its pre-natal existence.

In the article already referred to, Dr. Vernon mentions the contention of Sir George Newman, former Medical Officer of the Ministry of Health, that the diet of an expectant mother should include two pints of milk a day, together with butter, eggs, fruit and fresh vegetables; but such a dietary is far beyond the resources of poor women. Its favourable effect on health is suggested by an inquiry reported in *The Times*, December 8th, 1937, by Lady Williams. 10,384 mothers were given special food during pregnancy, and were compared with 18,854 others who did not get it. The maternal death rate was only 1·63 per 1,000 births in the former group as compared with 6·15 in the latter, whilst the infant death-rate was 57 per 1,000 in the former group and 102 per 1,000 in the latter.

The effects of poor nutrition on the health of the nursing mother and her offspring are implied in the following data, which were obtained at an Infant Welfare Centre at Chicago:

Treatment of infant	*No. of infants*	*Deaths per* 1,000
Wholly breast-fed	9,749	1.5
Partially breast-fed	8,605	7
Artificially fed	1,707	84

They show that the death of artificially fed infants was fifty-six times greater than that of wholly breast-fed infants.

At what stage in a child's life should one begin to think of his effective development? Miss M. Bruce Murray in 1924 conducted an inquiry for the Medical Research Council (Report 81), on the "Effect of Material Social Conditions and Nutrition upon Birth-Weight and Birth-Length". She found that:

> "The character of the adult population of any country, its vigour, health, and working capacity, is determined by development and growth of the children, not only in their post-natal environment but also in the wombs of their mothers. The foetus lives, like a true parasite, regardless of the expense to the mother."

This leads to the realisation that the child must be thought about before he is born. The pregnant mother needs attention. Expectant and nursing mothers require twice the normal adult protein allowance, that is of meat, fish, egg and cheese foods. Just one example of the havoc wrought through inferior feeding is that 80 per cent of the deciduous or temporary teeth of the children of this country are imperfectly developed. This defect may be established before birth and may be due to dietary deficiencies of the mother during pregnancy.

In North Kensington, free dinners and milk are supplied to expectant and nursing mothers. In 1937, one hundred and twenty-four applications were granted. Far too few mothers apply for these meals. There may be a spirit of pauperisation surrounding the granting of milk and dinners. The L.C.C., as the public assistance authority, pays for milk for those on out-door relief. The income standard for granting free milk is:

With two parents and	1 child	below	£2 5*s*.	per week
,, ,, ,, ,,	2 children	,,	£2 10*s*.	,, ,,
,, ,, ,, ,,	3 ,,	,,	£2 15*s*.	,, ,,

and 5*s*. is allowed in the income for each additional child.

These figures are for free milk only. They are far too low. Dinners and milk should be given in all cases where the family cannot afford to spend 10*s*. per week per head on food. This is Sir John Orr's figure as being the minimum on which one can obtain a full diet. "I hope before I die," said Countess Baldwin, "to see at all ante-natal clinics that mothers are given the nutrition which suits them in food that is not too rich, but full of vitamins." A nursing mother needs two pints of milk per day, and this should be obtained from the local dairyman through an order issued by the local public authority. While children are grossly underfed, there is always the possibility that the mother will share her milk with her other little ones. Here is a talk between the writer and a boy in his class illustrating this. Johnnie was asked about his breakfast. He said he had some tea. "What kind of milk did you have in your tea, John?" "Cow's milk," replied John. The teacher, knowing the size of the family, that the father was out-of-work, and how rarely fresh milk saw the inside of such a home, expressed surprise. "Well," says John, "Mother is nursing our baby and she gets a pint of milk every day from the clinic and she gives us a little of it in our tea." Protesting to the mother about this, she exclaimed, "Now could I drink fresh milk while my kiddies have tinned!"

A girl who, in infancy and early childhood, suffers from malnutrition, is liable to pelvic malformation. When she reaches womanhood, and with it marriage and pregnancy, it is found that in consequence of a weak pelvis, actual delivery of the child is extremely difficult, and instruments may be used to aid delivery. This is particularly the case with first-born children. Brain damage results, and unless this is extremely mild, leaves its mark on the mental abilities. Investigation on children who are considered backward, dull, nervous or fidgety, will in many instances show such symptoms to be due to injury to the brain at birth.

It cannot be overstressed that man in many ways is like a machine. He needs to be kept in the best condition if the best results are to be obtained. His existence should be appreciated from the time of conception. The expectant mother should have a full diet, should cease paid employment for some weeks before and after child-birth. While nursing the baby, she needs extra nourishment.

The Maternity and Child Welfare Act gives local authorities the power to assist mothers.

Under the schemes of maternity and child welfare of some London Boroughs, complete arrangements are made for the care of the expectant and nursing mothers, and children up to five years of age. The scheme includes ante-natal and post-natal clinics, infant consultation sessions, toddlers clinics, day nurseries, maternity homes, the provision of obstetric consultants for difficult confinements, dental treatment for mothers and toddlers, and the provision of dentures for necessitous expectant and nursing mothers, hospital and convalescent treatment for mothers and infants, home nursing helps, arrangements for the boarding-out of children while the mother is in hospital, or for their free admission to a day Nursery, facilities for the skilled nursing and treatment of cases of puerperal sepsis, and the supply of free milk, dinners and cod liver oil preparations to necessitous cases.

Mothers should take the fullest possible advantage of these facilities for the sake of their own health, that of the child and that of the family and community. Councils administering the Act should remove all taint of pauperisation from assistance rendered, the term "necessitous" should refer to mothers whose income does not permit of the optimum diet so essential in pregnancy and in nursing a baby. By bearing a healthy baby, a mother lays the best foundation for the child's full physical and intellectual development.

CHAPTER VII

PHYSICAL FITNESS

School medical records—Individual cases of ill-health—Special medical examinations—Avoidance of ailments—War and physical conditions—Infectious illnesses in Kensington—Tuberculosis—Rheumatism—Nursery schools and health—Comparative heights and weights—Standards of physical fitness.

To form some estimate of the health of the children under investigation, the School Medical Records were examined and the parents consulted. Aggregates of the major illnesses were as follows: Measles—19 cases; Whooping-cough—16; Bronchitis—7; Chicken-pox—5; Scarlet fever—4; Diphtheria—3; Pneumonia—3. Minor ailments and defects were not analysed, as in many cases no recent medical examination had been held. There were a number of speech defects, eye trouble, running of the ears and chorea. Among the worst individual records are: Case "B", aged 10½ years, had suffered from measles, whooping-cough and bronchitis all before attending school. On his medical card, his vision was down for observation: his teeth needed attention, there was something wrong with the glands of the neck; inclination to rickets; and a question mark appeared after chest. At the medical examination of November, 1936, he was marked "Probably certifiable". At the time of this investigation he had a sore throat, while just before, he had sores on his face. Case "E", aged 9 years 10 months, had whooping-cough before attending school; measles while at school; left ear mastoid operation in 1932; now suffers from chronic bronchitis; tonsils and adenoids had been removed. He talks in his sleep about school; finds it difficult to get up in the morning; is very highly strung; has a tendency to masturbation, and is unusually tall for his age. His intelligence is normal, but was three years backward in reading. Case "J", aged 9 years 8 months, suffered from bronchial pneumonia at 6 months; measles at 4 years of age; is generally bronchial in winter; glands of the neck—palpable; glasses have been prescribed but not worn; teeth have had attention; low nutrition; car accident in September, 1936; knocked down by motor-cycle in April 1937, leading to frequent nose bleeding. He was two years backward in reading, four years in spelling and one and a half years in arithmetic.

These three are merely typical of the medical history of most of the boys in the class, as the aggregate number of each illness for the class will have given some indication. The range of illnesses, their frequency, and the number of these which some of the children suffered, make one wonder not at their low physique, but how it is they are still alive. These records show the necessity for a complete medical overhaul when a child is referred to the Backward Class for educational purposes.

The King, in a message to the National Fitness Council, blazoned forth on the hoardings of the country says, "Nothing adds more to the pleasure of life and to the joy of work and playing than physical fitness." Not only does joy of work depend on fitness, but the capacity to work depends on being well. The achievement of good results in the classroom is dependent upon the child's health, and good conditions in the school. The L.C.C. Inspectors are agreed on the importance of good health to the backward child. They say in their Report:

> "Every child specified as backward should have a full particular (Medical) examination and continued observation by the school doctor. These investigations must be thorough, and special sessions would have to be arranged for them; they might result in recommendations for medical treatment, including "convalescence", or admission to an open-air school, to a stammering class, child guidance clinic or nutrition centre."

The teachers should be present during this medical examination, and there should be close co-operation between the educational and medical services in dealing with backwardness.

It would be no exaggeration to say that almost every London backward child suffers from some physical deficiency, but the defects which are of most immediate consequence in causing retardation and preventing progress are those of a sensory nature like hearing, speech and sight. Observations have shown that epidemics and general unemployment lead not only to an increase in infantile mortality but also lessen the vitality of children. The level of school work drops.

Major-Gen. Sir R. McCarrison, in his Foreword to *National Fitness*, makes some striking remarks about nutrition:

> "We think still in terms of disease and of salvaging of wrecks rather than in terms of health and the production of healthful efficient human beings. Our minds are still dominated by the idea of the microbe; too little attention is paid to the soil in which the microbe may take root, and too little to ways and means of sustaining the structure and functions of the body—of establishing resistance to disease by natural means."[1]

To sustain the body and to keep it functioning correctly needs sound nutrition, and this in turn depends upon not only the taking of good food, but also healthy home conditions, fresh air, sunshine and physical exercise. So-called ailments of babyhood, childish illnesses, growing pains, the bad skin and complexion of those reaching puberty, the discomforts of pregnancy, the illnesses put down to the change of life are all unnatural and avoidable with a well-balanced diet, a healthy home and good general conditions of life.

A good deal is being said these days about physical fitness. Is it pure coincidence that there is also a good deal of talk about the prospect of war? The Government seems to be greatly concerned about the health of the people only at times when it needs to conscript men and women for war purposes. The country was alarmed at the low physical condition of men at the time of the Boer War. A Royal Commission in 1902 enquired into physical training in Scotland. It found that "there was an undeniable degeneration of individuals in the classes where food and environment were defective", and "the primary condition of any good result from physical training is adequate food and adequate clothing". A further Committee in 1903 on Physical Deterioration reported on the need for medical inspection; for feeding necessitous school children; and that such deterioration was not "hereditary degeneracy" but an environmental one due to neglect, poverty and ignorance.

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[1] *National Fitness*, Edited by F. Le Gros Clark, B.A. (Macmillan.)

These enquiries led to compulsory medical inspections in schools, and to granting of voluntary power to education authorities to ensure that the necessitous child has some supplementary food, in order that he may be physically sound and benefit from his education. The whole of the legislation was drafted in a Poor Law spirit and to this day is administered in such spirit.

The returns of cases of infectious diseases notified for 1937 in Kensington are here given.

Disease	*Age in years*						
	Under 1	1–2	2–3	3–4	4–5	5–10	10–15
Scarlet fever	—	7	19	23	31	67	29
Diphtheria	6	16	21	21	24	55	16
Pneumonia	18	8	19	7	10	14	8
Dysentery	6	4	6	10	8	16	4
Acute Rheumatism	—	—	—	—	1	24	24

Infectious illnesses are usually associated with the child's attendance at school. The incidence is greater in the first five than in the second five years of the child's life. It has been found in hospitals where infection and cross-infection took place, that there was a considerable diminution of such illnesses, and a more rapid recovery where the wards were converted into open-air wards by one whole side consisting of roller-shutters. If schools and additional nursery schools were built or rebuilt on these lines, then one could hope for a general reduction in the illnesses.

In the same report it states: "Tuberculosis has always been associated with bad housing conditions; and with the general improvement in the housing standards, there has been a concurrent reduction in the incidence of the disease."

The Medical Research Council conducted an enquiry into "Social Conditions and Acute Rheumatism" (Report 114).

> "Strong evidence of the existence of factors due to environment is afforded by the social incidence of rheumatism; it is a disease which affects but rarely the children of the well-to-do. Its incidence is chiefly among the poorer classes. It is by raising the standard of environment, improving home conditions so that they approximate to the well-ordered conditions found in such institutions as those in which rheumatism was found to be much less common, that we may hope to reduce the frequency of rheumatism in children. The painful and crippling after-results of heart disease that follow the rheumatic affection can be prevented or mitigated by proper rest and care."

This record of illnesses is not the whole story. There are the after effects of infectious diseases. The so-called minor defects result—discharging ears, catarrh, enlarged glands, and sore eyes; and after scarlet fever often rheumatism.

The task of educators and the medical profession is not just to tinker with ills already apparent, but to prevent them occurring. Prevention is better than cure. The early illnesses of childhood would be to a large extent avoided, if open-air Nursery Schools were available for children from two years of age to five in all poor areas. It has been found that where an epidemic has been raging, children at an open-air Nursery School either escape the illness or do not get it with such violence. The after-effects, too, are less severe. The patients receive immediate medical attention and are under subsequent regular treatment. The healthy, active open-air and regular life led at these schools, together with the midday meal and other supplementary food, increases the resistance to disease. This means that the youngsters at a Nursery School have a better health record than those in the same district who do not attend such schools.

To present some comparative picture of the heights and weights for their ages of these working-class boys, the equivalent data has been calculated from the work done by Dr. Friend of Christ's Hospital School on boys who may be considered to live under good conditions of food, environment and medical supervision. It should be pointed out that the boys of the school under investigation wore indoor clothing, but no boots and shoes. Dr. Friend's boys were weighed in shirts, underclothes, breeches and stockings.

Case Ref. Letter	*Age Yr. Mth.*	*N. Kens. School Ht. (ins.)*	*Christ's Hosp. Ht. (ins.)*	*N. Kens. School Wt. (lbs.)*	*Christ's Hosp. Wt. (lbs.)*
H	10– 9	52·75	53·75	70·4	74·1
B	10– 7	50·75	53·6	63·4	73·3
Q	10– 6	55·5	53·5	75	72·9
L	10– 3	49·25	53·25	58·5	71·8
W	10– 3	52·75	53·25	64·5	71·8
E	9–11	57·5	52·8	75·25	70·3
U	9–11	48·0	52·8	49·5	70·3
T	9–10	47·25	52·7	52·8	69·9
Z	9–10	48·0	52·7	52·8	69·9
V	9– 9	52·0	52·5	65·8	69·5
S	9– 9	51·0	52·5	66	69·5
Y	9– 9	58	52·5	58·1	69·5
F	9– 8	52·5	52·4	66·4	69·2
I	9– 8	49·5	52·4	53·9	69·2
O	9– 8	52·25	52·4	61·8	69·2
D	9– 6	48·75	52·0	56·5	68·5
P	9– 6	47·5	52·0	53·7	68·5
R	9– 6	50	52·0	57·4	68·5
A	9– 4	49·5	51·7	66·7	67·9
C	9– 4	48	51·7	52·1	67·9
K	9– 1	48·75	51·2	54·1	66·8
X	9– 0	50·5	51·0	57·2	66·5
N	8–10	48·75	50·7	58·75	65·5
V	8–10	49·5	50·7	55·9	65·5
G	8– 9	51·75	50·5	61·8	64·9
M	8– 6	49·5	50·0	57·9	63·3

Only two (Q and E) reached the average of the Christ's Hospital boys in weight, and only five (Q. E. Y. F. G) reached it in height.

Averages for respective age groups for both schools are:

Average Age of Year Group	*Average N. Kens. School Ht. (ins.)*	*Average Christ's Hosp. Ht. (ins.)*	*Average Difference*
10 yrs. 5½ mths.	52·20	53·47	1·27
9 yrs. 7 mths.	49·94	52·2	2·26
8 yrs. 9 mths.	49·90	50·5	·60

Average Age	*Wt. (lbs.)*	*Wt. (lbs.)*	*Difference*
10 yrs. 5½ mths.	66·36	72·8	6·44
9 yrs. 7 mths.	59·36	68·85	9·49
8 yrs. 9 mths.	58·59	64·9	6·49

In order to get some sort of picture of the physical measurements of these boys, attempts were made to find standards with which to compare them. This proved a difficult task, and led to the question: "What is a normal child?"

Height and weight tables compiled years back no longer apply to-day. There has been a general increase in stature of the nation's children. In Sheffield, for example, the average height of school children has increased since 1902 by 3¼ inches; and the average weight by 13¼ lbs. There is also a danger of confusing what might be called the normal standard for an area with the average standard. The present height and weight tables in use were compiled from a large number of cases, which included not only healthy normally developed boys and girls, but also subnormal cases. Normals have been fixed for blood temperature, for heart beating and for respiration. These figures were not obtained by including the abnormal or the sick. Arguments are also advanced that some races are materially taller and heavier than others. While one agrees that there is a racial difference, one cannot accept this unreservedly. In the same way that the children of England generally have increased their average height and weight over a number of years, so the increase in stature of the Japanese living in America seems to suggest that even the short-built races outgrow their usual size with a more ample life. To get figures of some normality for height and weight for a child's age, tables should be derived from weighing and measuring those eating an optimum diet and enjoying perfect hygienic conditions.

Dr. Spence, investigating the health and nutrition of poor and well-to-do children aged one and five years in Newcastle found 25 per cent of the professional-class children above and only 5 per cent below accepted standard heights, while less than 2 per cent of the poor class were above and 47 per cent were below. In the case of weights, 48 per cent of the better-class children were above standard and 11 per cent below as against the corresponding percentages of 11 and 55 among the poor. A comparison made between the physical development of boys of fifteen in four public schools and in a South London riverside district showed that the public schoolboys (who were getting half as much food again and that in a more nutritious form) were on an average 15-20 lbs. heavier.

Dr. James Kerr found that the public schoolboy aged thirteen last birthday has an average height of 60·6 inches, being 4 inches above that of the average elementary schoolboy of the same age. Are there any racial factors to account for these striking differences, or may it be that food and environment are the main factors? Dr. Kerr says:

> "Scientific invention and discovery have shown us how to produce an abundance of material goods for all. We cannot accept a different standard of health for rich and poor. We must make all our children pass into one national standard of physique, and no longer regard as inevitable of the act of God an inferior physique for artisans and superior for professional classes, knowing that although inferior heredity plays a part, the difference is largely due to social failure to remedy causes within control and, is therefore, an index of national inefficiency."[1]

[1] J. Kerr, *Fundamentals of School Health.*

CHAPTER VIII

FOOD

Specimen meals—Deficient diets—Food of rheumatic children—Food and life—Classes of foods—Vitamins—Chemical salts—Food values—Standards of nutrition—Income and food—Adequacy of diets—The food of the poor—Food supplies—Food and profit—Adequate feeding of children.

WHAT DO THE children of North Kensington, as typified by those in attendance at this particular school, eat? It should be pointed out that the enquiry into meals was made on a Monday and Tuesday. These are comparatively favourable days for food in the home of the manual worker who is usually paid on a Friday or Saturday. The food deteriorates in kind and quantity as pay-day recedes. One group consists of those boys whose mothers go to work. There are nine such cases. It will be seen from examples given that the midday meal is inadequate except in Case D, nor can there be effective supervision between the hours of noon and 2 p.m. Case letters, fathers' occupations, and number of children at school and under school age follow:

C. Maintenance man in block of flats. Three children.
D. Away from home. Two children.
E. Window cleaner. Two boys.
H. Flower seller. Six children.
P. Unemployed or odd jobs. Three children.
R. Breaking-up old cars. Two children.
U. Labourer on railway. Two children.
V. Builder. Two children.
W. Post-office cleaner. Two children and a brother of 17 out of work.

Note: Bread is usually spread with margarine, but called butter by the boys.

Case	*Breakfast*	*Dinner*	*Tea*	*Supper*	*Notes*
C	Porridge	Egg on toast	Bread, Butter, Tea	—	Free milk Mother prepares dinner
D	Gets own breakfast	School dinner	"Big" meal	Bovril	Free milk
E	Oats	2*d.* for Pie	"Big" tea	Banana or cocoa	School milk
H	Bread, Butter, Tea	1*d.* chips	Bread, Butter, Tea, Corned Beef, Pickles	—	—
P	Egg, Bread, Butter, Tea	Bread, Butter, Tea	Bread, Butter, Tea	—	—
R	Egg, Bacon, Tea	3*d.* Pie and Mash	2*d.* Biscuits Tea	—	Other brothers at work
U	Shredded Wheat	Egg and Bacon, Tinned Pears	Big meal sometimes	Cocoa	Sister at work School milk
V	Oats	Sausage, Bread	Big meal	Apples	—
W	Cheese, Bread	1d. Chips	Big Meal	1d. Chips	Free milk

Here are the diets of three boys whose fathers are unemployed.

A. Father is a Carman; mother has heart trouble. Two boys.

I. Father is a skilled scale-maker. Four children under 14 years.

M. Lorry-driver. One boy.

Case	*Breakfast*	*Dinner*	*Tea*	*Supper*	*Notes*
A	Oats	Potatoes, Corned Beef	Bones, Potatoes, Greens	Bacon-bone Soup	—
I	Toast, Tea	School Dinner	Cakes, Bread, Butter, Tea	—	Free milk
M	Biscuits, Coffee	Steak, Potatoes	Cakes, Coffee	—	Does not like tea

Below are some cases where fathers are at work.

F. Baker. Four children under 14 years.
G. G.W. Rly. Fireman. One boy at school and a baby of 7 months.
J. Lorry-driver. Four children. Mother pregnant.
L. G.W. Rly. Fireman. Two children at school.
S. Labourer. Six children under 14 years.
X. G.W. Rly. Engine driver. One boy at school.
Z. Dustman. One boy at school.

Case	*Breakfast*	*Dinner*	*Tea*	*Supper*	*Notes*
F	Bread, Butter, Tea	Potatoes, Meat, Greens	Bread, Butter, Tea	Cornflakes	"Don't like cold milk"
G	Bread, Butter, Tea	Sausages, Potatoes, Greens	Toast, Tea	—	"Can't afford milk"
J	Oats, Bread	Stew	Potatoes, Meat	—	Free milk
L	Porridge	Stew	Bread, Jam Tea	Banana or Apple	—
S	Porridge, Tea, Bread and Butter	Faggots, Potatoes	Bread, Butter, Tea	Cheese	"No money for milk"
X	Bread, Butter, Jam, Tea	Rabbit, Potatoes	Egg, Bacon	Tea	Table well laid
Z	Bread, Butter, Tea	Two "Oxo's" Bread	Bread, Butter, Tea	Broth	Milk

Two boys were getting school dinners and free milk, and five others were receiving free milk.

Examination shows the children's diets to be far from perfect. Of foods necessary for good nutrition; starchy foods predominate. There is a deficiency of proteins, fats and vitamins in almost every case.

The excretions of the boys are an indication of excessive starchiness of their food. The faeces are so thick, that a somewhat exaggerated remark may be quoted: "The rolls are as thick as a man's arm. I don't know how they can get out of a child's body." Children should be encouraged to drink water as this helps in the digestive processes. Water might be made available in school playgrounds throughout the school day; and drinking fountains installed of a modern cupless type with a good flow of water. The L.C.C. are increasing the number of drinking taps in all new schools to three per department outside the actual school building, and one for each range of lavatories inside. These three taps should not be close together. They could serve a larger number of children in a given time, if they were placed in different parts of the playground.

Two voluntary workers of the Kensington Borough Council investigated the diets of ninety children all suffering from juvenile rheumatism or pains suggestive of early rheumatism. The investigation was based on the following points:

1. Details of the day's meals.
2. Favourite type of food.
3. Likes and dislikes.

It was thought that the rheumatic child had a taste for acid foods, particularly vinegar. Some of the results (Medical Officers' Report, 1937) show that forty-nine children liked condiments, fifteen having a special preference for vinegar. Although twenty-three children stated that fruit was their favourite food, very little appears to have been given in their diet. For breakfast, only one had fruit, for dinner only seven, for tea none, and for supper three. As oranges should be a very important item in the diet of rheumatic children, owing to the known shortage of Vitamin C in many cases of rheumatism, this is obviously a serious defect.

Without food there is no life, and on a properly balanced diet depends the efficiency and normal growth of the body. Food determines the power to heal and the power to resist infection; the functioning of the nervous system; the digestive system; the action of the heart; restfulness of sleep; the power to see, feel and hear. Food not only makes good the wear and tear of the body but also supplies heat and energy.

As food is of such importance to life, one should know which foods are necessary, the functions of these and their relative importance.

Among the foods specially rich in protein, that is the body-building foods, are cheese, milk, eggs, meat, fish, peas, beans and nuts. Among the body workers and warmers, called carbohydrates and fats are the starchy foods and sugars—as bread, cereals, potatoes, pulses, sugar, butter, margarine, suet and other fats. Protective foods are those which contain vitamins—dairy produce, fish oils, salads, vegetables and fruits. Those for high vitamin content are eggs, butter, milk, herrings, fish roes, cod liver oil, liver, salads, carrots, greens, tomatoes, oranges and lemons.

Besides vitamins which are supplied in the food taken, hormones, which are manufactured within the body, regulate the organic processes. They might be called chemical regulators. The functions served by the different kinds of vitamins should be recorded. Vitamin A maintains in healthy condition skin cells and the thin lining of the respiratory, digestive and urinary passages. It also resists infection. Vitamins B1 and B2 are needed for normal growth, and maintain the general health of the nervous system. Vitamin C maintains the fitness of myriads of small blood vessels, and is a preventative of scurvy. Vitamin D regulates the depositing of mineral salts, particularly in the growing ends of bones. Lack of it in infancy may lead to deformities of the pelvis, and cause difficult labour in child-birth for the adult woman. This vitamin is not only contained in certain foods, but is formed by exposing the body to the rays of the sun. Lack of vitamin D will cause rickets.

Professor Mottram, discussing the Physical Fitness Campaign, points out as regards vitamins, especially B and C, that the more work one does the greater is the need for these vitamins. Suppose you have a man just on the verge of neuritis due to a lack of vitamin B in his diet. You may push him over the edge into neuritis by increasing the work he does. Coolies, on a diet, which has just sufficient vitamin C in it to prevent scurvy appearing when the recipient is resting, develop scurvy when they undertake arduous work in the mines. This suggests that anything short of the best nutrition is malnutrition. It follows that until our nutrition is right, money spent on physical exercise is waste.

There remain the other essential constituents of foods to deal with—chemical salts. Calcium and phosphorus are necessary for building bone and teeth; while iron is necessary for the red matter of blood. A deficiency of iron leads to anaemia, a common complaint among mothers and infants of the working class.

The table on the next page, taken from the Final Report of the League of Nations Committee on Nutrition, shows the relative nutritive value of foods, and it will be seen that those mentioned above are the important ones.

Sir John Orr defines the ideal of nutrition as a "state of well being such that no improvement can be effected by a change of diet" (*Food, Health and Income*, 1936). He says:

> "The standard of nutrition that should be adopted is one that will enable people to attain their maximum inherited capacity for health and physical fitness. In animal husbandry, an optimum diet, far from being utopian, is regarded as good practice. If children were reared for profit like young farm stock, then giving them a diet below the requirements for health would be financially unsound. Unfortunately the health and physical fitness of the rising generation are not marketable commodities which can be assessed in terms of money."

NUTRITIVE VALUE OF FOODS

Food	*"Good" protein*	*Minerals*	*Vitamins*				
			A	*B*	*C*	*D*	
Milk	XX	XXX	X	X	X†	X†	Highly protective foods
Cheese	XX	XX	X	X	—	—	
E Eggs	XX	XX	X	XX	—	XX	
E Liver	XX	XX	X	XX	—	X	
E Fat fish (herrings, &c.)	X		X	X	—	XX	
Green vegetables, salads	X	XXX	X	X	XX	—	
Raw fruit, fruit juices		XXX	X	X	XX	—	
E Butter	—	—	X	—	—	X†	
Cod-liver oil	—	—	XXX	—	—	XXX	
Yeast	X	X	—	XX	—	—	Less protective foods
Meat (muscle)	X	‡	—	X	‡	—	
Root vegetables, tubers			X*	X	X	—	
Legumes (dry peas, lentils)			—	X	—	—	Less protective and non-protective foods
E Cereals, bread (wholemeal)	X	‡	‡	X	—	—	
E Cereals, bread (white)			—	—	—	—	
E Cereals, rice (polished)			—	—	—	—	
E Nuts	‡		—	XX	—	—	
E Sugar, jam, honey			—	—	—	—	
E Margarine, olive oil and other vegetable oils			—	—	—	—	

E= foods of high energy or caloric value.
XXX signifies very rich.
XX signifies rich.
X signifies present.
‡ signifies present in small amount or traces.
— signifies absent.
† signifies in summer, when the cows are on pasture.
* signifies if yellow in colour.

Sir John Orr arranged the population of this country into six groups according to income per head per week and expenditure on food.

Group	*Income per head per week*	*Expenditure on Food*
1	Up to 10*s*.	4*s*.
2	10*s*. to 15*s*.	6*s*.
3	15*s*. to 20*s*.	8*s*.
4	20*s*. to 30*s*.	10*s*.
5	30*s*. to 45*s*.	12*s*.
6	45*s*. and over	14*s*.

Concerning the adequacy of diets in these groups, he estimates that the average diet of Group 1 is inadequate for perfect health in all the constituents considered. The diet of Group 2 is adequate only in total proteins and fat. That of Group 3 is adequate in energy value, proteins and fat, but below standard in minerals and vitamins. The food of Group 4 is adequate in iron, phosphorus and vitamins, but probably below standard in calcium. The diet of Group 5 has an ample margin of safety in everything with the possible exception of calcium. In Group 6, the standards required are exceeded in every case.

Sir John Orr discovered that:

(1) An income of 20*s*. to 30*s*. per head per week will give a satisfactory diet with the exception of calcium.

(2) 50 per cent of the population are below this level.

(3) That at least 10*s*. per week per head should be spent on food in its unprepared state.

(4) The poorest group have 1·8 pts. of milk (including tinned) per head per week, while the wealthiest have 5·5 pts.

The poorest have 1·5 eggs per head per week to 4·5 for the wealthiest.

The poorest spend 2·4*d*. per head per week on fruit compared with 20·0*d*. that the richest spend.

(5) As income increases, disease and death-rate decrease, children grow more quickly, adult stature is greater, and general health and physique improve.

(6) Tests show that improvement of diet—in the lower groups—is accompanied by improvement in health, and increased rate of growth which approximates to that of children in the higher income groups.

The income figures of the parents of these North Kensington boys, analysed according to Orr's Groupings, show:

Group 1—13 families
,, 2— 8 ,,
,, 3— 4 ,,
,, 4— 1 family

In group 3, the average income per head per week of 3 of the 4 families approximates to 20*s*. There are thus 4 families out of 26 that may be placed in that category of income which allows for a satisfactory diet.

The conclusion reached is that supplementary feeding is necessary in 22 cases.

How are these children to get the food necessary for optimum physical and mental development? Several ways can be mentioned. The most obvious is to raise wages and unemployment pay without increasing the cost of living. A memorandum issued by the Committee against Malnutrition in July, 1938, and signed by seven leading doctors and university professors, says this cannot be, until there is a change in the economic system of the country. They suggest taking out of the hands of private concerns production and distribution of foods essential to the health of the nation. Vital foods, like milk, fruit, vegetable and fish, could thus be reduced in price to be brought within the reach of all. When this is done, anomalies such as milk being supplied to manufacturers of umbrella handles at 9*d*. per gallon, while local authorities pay a shilling and private consumers up to 2*s*. 4*d*. per gallon would be abolished.

When food is no longer at the mercy of the God Profit, then no longer will it be necessary for fishermen to go on strike as they did in August, 1938, against the throwing back into the sea of hundreds of thousands of fish. In order to keep prices up, the buyers in Ayr would not purchase the whole of the catch, so 100 tons of the finest herrings in the world were dumped back in the sea. Herrings at this time were being sold to the housewife at 4*d.* lb. small, and 6*d.* lb. larger size. The irony of it all is that science is being used increasingly to secure a greater yield of fish. The aeroplane spots shoals of herrings, for instance, off the Shetlands, drops a note into the harbour, a fishing vessel picks it up and out go the boats. It is good for science to be harnessed for the increase of food production. It would be better if the country were so organised that the underfed children, mothers and men could enjoy this food.

Children might get a sufficiency of food through an extension of the school feeding system. At present the quantity, quality and variety of food a child enjoys depend on such variable factors as father's pay, size of the family, costs of foods. In times of unemployment or strikes or lock-outs, father tightens his belt, mother gets thin and carries on. The urgent primal need of children for food should be outside the struggle for a living. Food, like education itself, should be brought under the control of local authorities, the major part of the expense being borne by the national exchequer.

CHAPTER IX

SCHOOL FEEDING

Administering the law—In Willesden—In London—Definition of malnutrition—Income scale for free meals advocated—London County Council and School feeding—Board of Education (1937) report—Changes urged.

THE LAW RELATING to School Feeding is as follows:

> "Where the local education authority resolve that any of the children attending an elementary school within their area are unable by reason of lack of food to take full advantage of the education provided for them, and have ascertained that funds other than public funds are not available or are insufficient in amount to defray the cost of food furnished in meals under this Act, they may spend out of the rates such sum as will meet the cost of the provision of such food."

A letter from a reader in Winchester appeared in the daily press on August 2nd, 1937, which reads as follows:

> "In a town not so far from here a child must show actual signs of under-nourishment before being allowed free milk, no matter how low the family income. If the parents starve themselves to feed the children the State will do nothing to ease the situation.
>
> "If a child having free meals attains a normal standard it can be taken off the list, although no alteration has taken place in the parents' circumstances, until it again reaches the required level of under-nourishment."

This is one way of administering the Law. Not all Education Authorities administer the school-feeding regulations in this manner. Marjorie Green, M.A., Secretary of the Childrens' Minimum Council, quotes Bradford as being successful in providing both free and cheap meals on a considerable scale. Nearly 1,000 children pay the full charge of 3*d.* a day for school dinners. About twice as many are fed at prices ranging from ½*d.* to 2½*d.* No distinction is made between those paying the full price (which more than covers the cost of food) and those who are "assisted".

In Norway every child on arriving at school is offered a good nourishing meal. This is known as the "Oslo breakfast" and ensures that no child starts the day's work insufficiently fed.

Where authorities have school feeding schemes there is an apparent lack of a uniform standard for selecting the children for school meals. In Willesden, an income test is imposed. In some other areas, it depends on the state of malnutrition as shown by obvious physical signs. In London it seems to vary from school to school. One head-teacher of an infants' school in North London had a backward class of 30 on roll. Seventeen received free milk twice a day. Of these, 12 had, in addition, cod liver oil, and 12 had free dinners. She blamed unemployment for lack of food leading to backwardness, and quoted children of large families who were not allowed to be given school dinners because the parents were receiving assistance from the Public Assistance Committee—in this case the London County Council. This authority has the power to remit the claim on parents receiving Public Assistance for school dinners.

The Middlesex County Council, on the other hand, makes no deduction from "relief" in respect of school feeding. As a result, the Willesden Education Committee, responsible for School Feeding, reports that recipients of these meals are mainly children of the unemployed, of widows and deserted wives.

The regulations for the selection of children in London for the provision of meals allows for the following procedure: The head-teacher may place on the Meals Register names of children considered to be in need of food, whether the parent has applied for such meals or not. The list is sent to the Children's Care Committee for investigation. The head-teacher has the power to grant meals to children in urgent need pending the investigation. Meals may be granted free or some charge made, the parents being so informed. If a care committee varies its decision, the parent has the right of appeal. Each case is treated on its merits. This means that the qualifying conditions vary not only from district to district but also from school to school. One case has come to the writer's notice, related to him by a mother at an "Educational Advance Conference" of the London Teachers' Association. She had transferred her boy from his previous school, because she heard that the head-teacher of his new school was more generous with regard to school dinners.

There are many who prefer to suffer and perhaps let their children suffer rather than apply for help to the Public Assistance Committee or to the school. This is probably due to a spirit of independence and partly to the stigma which seems in many parts of the country to be attached to the receipt of Public Assistance through its association with the old Poor Law.

Concerning the children of the unemployed in London, the regulations say that "dinners may not be supplied to children attending ordinary public elementary schools whose parents are in receipt of out-relief except in special circumstances when, by agreement with the relief committee, dinners may be given as part of the relief at the expense of the Public Assistance Committee". It is to be hoped that the L.C.C. will follow in the footsteps of the Middlesex County Council in recognising that the unemployed allowance for a child is inadequate for maintaining health, and give free dinners without deduction from relief to all children of the unemployed.

The definition for malnutrition should be that of Dr. E. H. Wilkins and Mr. A. H. Rollason—"If a child's nutritional condition is capable of being improved, it follows logically that its nutrition is defective." While nutrition depends on housing, clothing, fresh air, holidays, physical activity as well as food, the simplest test for adequate food is the income test as determined by Sir John Orr. Only in the income groups with 20*s*. to 30*s*. per head per week and over is diet adequate for full health. If a parent cannot spend at least 10*s*. per week on food for her child, then that child cannot be taking food for perfect nutrition, and must therefore be suffering from some degree of malnutrition. It is clearly the duty of the education authority to step in and provide supplementary food so that the child may grow to its maximum physical and mental stature.

London has already adopted an income scale for the granting of Junior County Scholarships. To obviate the duplication of scales and to reduce the formula for the granting of free meals, this scale might be used for the giving of supplementary food, such food to be given to cases within the limits of income where an annual monetary grant is allowed the scholarship winner.

Junior County Scholarship Grants:

Annual income of parents not in excess of	*Number of dependent children*					
	1	2	3	4	5	6
	Amount of annual grant					
	£	£	£	£	£	£
£150	9	9	9	9	9	9
£200	6	6	9	9	9	9
£250	6	6	6	9	9	9
£300		6	6	6	9	9
£350			6	6	6	9
£400				6	6	6
£450					6	6
£500						6

The London County Council is adopting a forward policy in its school-feeding programme. A supervisor for London has been appointed; nutrition centres are established to which children needing special medical examination are referred by the doctors; additional central kitchens are being opened, to reduce the number of dinners prepared for children by private caterers, and to relieve domestic economy centres in some measure of preparation of children's dinners; and food is bought in bulk at wholesale and sometimes at importers' prices. Milk is supplied to children during holidays. As an experiment, the L.C.C. is providing some children with a midday meal based on the "Oslo" breakfast. As a result of extending the dining facilities, it is to be hoped that the sight of lads of eleven to sixteen years eating a penn'orth of chips outside Central Schools during the midday recess will be a thing of the past. The price of a meal might be brought down to 2*d.*—the cost of the ingredients to the Council. Provision at least should be made for boys and girls at Senior and Central Schools to have any lunch they bring to school in the dining centre, free. At present, a charge of 2*d.* per week is sometimes made. This charge is enough to prevent many using the dining hall and to lead to eating chips in the street.

Some changes in the School Feeding Regulations were announced in the L.C.C. Gazette of August 22nd, 1938. Mothers, who through illness or absence from home cannot prepare a midday meal, may secure school dinners for their children, by paying the cost, at present 4*d.*, providing there is room at the centre. Necessitous children shall have first claim to any available room. No preferential treatment is to be given to children whose parents pay for their meal. This is one step on the road towards eliminating pauperisation of the necessitous child. It can be claimed that these changes are in part due to the school feeding section of the Report on this class of backward children.

It is the tradition of Poor Law atmosphere that still pervades the free dinner system. In Willesden, with one of the best school-feeding schemes in the country—the children are fed seven days a week throughout the year—deal trestle tables and long forms are still in use. Knives and forks are used once a week, when there is a joint. On other days, a spoon only is given the children. Dining Halls should be bright, warm and cheerful; tables, decorated with vases of flowers, should seat not more than twelve, and be covered with lino or cloth. There should be chairs instead of forms. Habits of hygiene could be inculcated, and all might wash their hands before sitting down. Tables can be laid every day with knives, forks and spoons and tumblers of water. The older children can look after the younger ones. Talking should be allowed.

Instead of dinner tickets being handed to the children and passed on to the cook, a list of names might be sent direct to the responsible person in charge of the centre. Certainly no list of the names of children who have free milk or dinners should on any account be displayed in a school hall or classroom. The new L.C.C. Dining Centres are being equipped with up-to-date cooking equipment and are bright and airy.

The Report of Sir Andrew McNalty, Chief Medical Officer of the Board of Education, issued at the end of December, 1938, states that one in ten of Britain's school children are below the recognised "normal" standard of nutrition. He points out that the absence of a satisfactory standard of normal nutrition explains the many divergent returns as to the nutritional conditions of elementary school children.

An account is given of schemes for the provision of solid meals, and attention is drawn to a distinction which has grown up between "School Canteens", where normal children can purchase meals, and "Feeding Centres", where necessitous children who are under-nourished are provided with free meals. The report says: "This dichotomy is neither complete nor desirable."

In discussing the quality of meals provided, the report says:

> "It is pleasing to note that many authorities are recognising the need to improve both the quality and the quantity of the diet they provide.
>
> "Other authorities, however, still persist in a monotony of hash, stew and soup, which in addition to being monotonous are often deficient even in calorie value, and deficient in just those elements of a well-balanced diet which a necessitous child does not get at home, such as milk, cheese, eggs, green vegetables, fruit and meat."

In assessing the nutritional state of a child, the school doctor is asked to place him in one of four categories—1 for "excellent", 2 for "normal", 3 for "subnormal", and 4 for "bad" in the records cards. Nutritional state is governed by a number of conditions, including general and facial appearance, posture, colour and texture of skin, thickness of tissue under the skin, hair texture, muscle condition. Only a minute or so is allowed for this part of the inspection. The results are not always satisfactory. There is a danger particularly in a uniformly poor area that the "average" nutrition of children inspected will gradually come to represent the "normal" or perfect standard to the observer, whether he be teacher, doctor, nurse or even parent, and doubtful cases will be passed, or failed in reference to a standard itself subnormal. It would be advisable for doctors and nurses to be moved round from a poor district to a wealthy one periodically to get a better idea of an optimum standard.

In view of Sir Andrew's reference to the absence of a satisfactory standard of nutrition, and the fact that so many education authorities only grant meals when their medical officers certify a low state of nutrition, the following account of a paper read by Mr. Huws Jones to the Royal Statistical Society is here given. This account by "M.O.H." was taken from the journal *Medicine To-day and To-morrow* (January, 1938). In the paper read by Mr. Jones, he analysed not only the assessments of different medical officers upon the same children, but also the same doctor's assessments upon the same children when re-examined after a short interval. The results of his work show how unreliable are the figures published by the Board of Education on malnutrition in this country. Four experienced medical officers of the Liverpool Education Committee were given the task of assessing the nutritional state of a number of children on a superficial or clinical examination only. While one doctor stated that seventeen boys were of excellent nutrition, another found only one could be placed in this class. In Category 3 or Subnormal, the results varied from twenty-four to thirty-eight boys, while three doctors placed one boy in Class 4 or Bad, and a fourth officer estimated that five could be placed in the poorest class.

Similar experiments were conducted in other schools of Lancashire, Cheshire and Breconshire. In Cheshire five doctors examined 200 children on two occasions, a week apart. Extraordinary differences of opinion were observed, perhaps the most striking being that whereas one doctor placed only three boys in the subnormal group, another thought ninety should be placed in this group. Further, the proportions placed in the different nutritional categories by each doctor differed considerably after a lapse of only one week. All of them placed many more in the excellent class at the end of the week and, with one exception, many fewer in the subnormal class.

As far as school feeding in London is concerned, one can summarise the urgent needs:

(1) The inclusion in school feeding of children of the unemployed with no charge on the parents.
(2) The fixing of an income scale for the granting of meals.
(3) The provision of school dinners during holidays.
(4) Dining centres, with a high standard of equipment, to be established in all senior and central schools, with a maximum charge of 2*d*. per dinner, no charge being made for use of the centre if a child brings his own lunch.

(5) The addition of a liberal and frequent supply of raw fruits, salads and edible raw roots.
(6) The availability of drinking water on the tables.
(7) Raising of the standard of furniture and equipment of feeding centres.
(8) Publicity to be given by the L.C.C. to the opportunities afforded for school-feeding.

CHAPTER X

DIETETIC EXPERIMENTS

Comparative effects of a balanced breakfast—Results of supplementary chocolate and milk—Extra milk to boys—Rations to supplement diet deficiencies—Nutrition enquiry.

A GREAT DEAL HAS been written about nutrition, the necessity for optimum feeding of the child and the relation between food, physical health and intellectual inefficiency.

Experiments in supplementary feeding have actually been made to test physical benefits, while others have also taken into account the mental and intellectual progress made.

In view of the direct connection claimed between physical and mental efficiency, the experiment conducted by Dr. A. H. Seymour and J. E. F. Whitaker is described somewhat fully. It was taken from the summer number (1938) of *Industrial Psychology*, organ of the National Institute for Industrial Psychology. The experiment aimed at finding the comparative effects on two groups of children of a properly balanced breakfast and of their own deficient home breakfast. The children were drawn from an infants' school of ages about six years, all below the average in intelligence and coming from poor homes. It was found that the weight, the hand temperature, the apparent resistance to fatigue and the school achievement (in English, poetry and arithmetic) of an experimental group of children receiving a dietetically balanced breakfast were more satisfactory than those of an otherwise similar control group being fed at home as usual. The number of children tested (fifty) was relatively small. The results are not claimed to be conclusive, but the authors of the experiment are convinced that the conclusions which they draw would be confirmed by further experiments. They are, moreover, of sufficient and practical importance to encourage further investigation.

The experiment was carried out in 1933 during an investigation by the N.I.I.P. on behalf of the National Union of Teachers, and arose out of the generosity of the Barking (Essex) Education Committee who provided the meals and defrayed the cost. It was discovered that the hand temperature of the "C" group or backward group of infants was lower than that of the "A" section or bright children. Sixty per cent of the "C's" were receiving unsatisfactory breakfasts, usually tea, bread and butter—probably margarine. Many of the "A's" were having porridge and eggs or bacon. A group of fifty backward children was investigated. They were arranged in two sections as nearly equal as possible in intelligence, physical condition and educational attainment. Their average age was the same—about 6·6 years. One section of twenty-five, called the "experimental group", was provided with breakfast at school, consisting of fruit juice, porridge made with milk, fish or eggs, brown bread and real butter, and cocoa made with milk. The other or control group had the usual breakfast at home. The two sections formed a single class taught by the same teacher in an ordinary classroom. The experiment lasted eight weeks from February to April, 1933.

One difficulty at the start was to persuade the experimental group to sit down and eat their food in a leisurely way with knife, fork and spoon. They preferred to walk about with bread and butter in their hands or to jump up during the meals. It took ten days of gentle persuasion to make them keep seated and enjoy their food. Also after ten days, the large increase in their mental output began.

They were all weighed at the beginning and end of the period. The Experimental Group gained ·96 lbs. in two months; the Control Group ·52 lbs.

Hand temperature was taken twice daily on two parts of the hand—the middle of the palm and the tip of the first finger. The average temperature at the beginning was the same for both sections. The children having the special breakfast soon recorded a temperature of 1° C higher each day than the other group. It was observed that after school breakfasts were discontinued, the average hand-temperature of those previously receiving the breakfasts at school dropped in three days to that of the Control Group.

A Mental Output Test was conducted. The children were asked to cancel for three minutes every letter O which occurred in a sheet of 2,000 letters of the alphabet. This test was carried out twice every morning. The differences in the output of the two groups may be taken as giving some indication of difference in their resistance to fatigue. The average scores of the two groups were the same at the start. During the first ten days there was a small increase of the "Breakfast" group. After ten days, the increase became much greater. There was a gradual rise in the scores of both groups due to practice. The Experimental Group showed 10 per cent more output than the home-breakfast group.

To estimate progress in knowledge in Arithmetic and English, test papers were given before and after the experiment in collaboration with the teacher. The "Breakfast Children" showed 10 per cent better results than the home-breakfast group.

The summary of the experiment and of the conclusions reached is: When an adequate dietetically-balanced breakfast is given to infant school children below the average intelligence, they develop a greater gain in weight, a higher hand-temperature, greater mental output, and greater progress in school subjects, than is shown by an otherwise identical group of infant school children who continue to have their unsatisfactory breakfasts at home. These children came, on the whole, from the poorer homes. Their hand-temperatures were found to be on the average, lower than those of other infant children above average in intelligence.

Dr. E. H. Wilkins of Birmingham had a special kind of vitamin chocolate milk prepared and supplied free by the Cow and Gate Research Department. A number of children were fed daily on this food as an extra to that taken at home, and these children were compared with another group of children of the same ages and home conditions, who, however, did not receive the supplementary ration. This group was called the "control group".

The following changes in functional conditions were noted in individual cases—longer and sounder sleep; reduced fidgetiness; improved appetite; increased energy; less frequent requests to urinate; less sweating; timidity and sleep-walking overcome; in general—awakened pride in personal appearance and improved cleanliness among the boys; increased general spirits; better colour; better skin; less septic points and more rapid healing. These children, on the whole a dull and listless group, became so full of life as to have created rather a problem of school management.

On the educational side, there was improved response and power of concentration; greater interest; better memory; improved motor control; and greater zest and participation in play and school games. In five months, four children increased their reading age by 15 months; 18 months; 2 years; and 2 years 5 months respectively. These functional results were not observable in the control group.

These results were obtained by only a partial correction of malnutrition. One may well wonder what would be the improvement if their nutritional deficiencies were wholly rectified. The fact that the other faults in their environment remained unaltered, demonstrated the potent influence of proper food on the well-being of the children.

Dr. Corry-Mann conducted a classical experiment in human nutrition. He gave boys in an institution, well fed according to general standard, dietary supplements, one of which consisted of a pint of milk every day. The forty-one boys who received the milk made an average increase in weight of 6·98 lbs. and in height of 2·63 inches for the year, while the control group that did not have the extra milk increased by 3·85 lbs. in weight and 1·84 inches in height.

Another experiment was one done by Major-General Sir Robert McCarrison. He planned supplementary rations so designed that they would make good the deficiencies in the children's total dietary. Thirty children received the extra food, while another thirty—the control group, did not. The ages of the children were 8 to 9 years. They were chosen from a normal and a backward class, and mixed. There was an equal number of boys and girls, and many were from very poor homes. The attendance over the five months showed:

Fed Group	Controls	Whole School (236)
94·5 per cent	92·8 per cent	89·4 per cent

Changes in weight, making allowances for various factors and excluding special cases were—the Fed Group, 2·6 lbs. or 5·5 per cent increase; the Control Group, 1·6 lbs. or 2·8 per cent.

In Scotland, Sir John Orr gave 1,500 children extra milk for seven months. The rate of growth of these was 20 per cent greater than those elementary school children not getting this extra milk.

The Carnegie Trustees have allocated £10,000 to meet the cost of an "Enquiry into the connection between Economic and Social Factors and Physical Welfare", to be conducted by a selected staff of investigators under the direction of Sir John Orr of the Rowett Research Institute, Aberdeen. Sir John Orr has defined the scope of the experiment—(i) An economic and dietary survey of (say) 1,000 representative working-class families; (ii) a clinical examination of the children of the families so surveyed; (iii) a demonstration of the effect on health and physique of bringing the diet of perhaps 200 families, or the children of the families, up to the optimum health standard. The inquiry is to be conducted in selected areas in England and Scotland.

Would it be possible for the Carnegie Trustees and Sir John Orr to extend the scope of the Enquiry to include the connection between economic and social factors and mental welfare?

CHAPTER XI

SCHOOL CAMPS

Lack of country holidays and mental effects—School journeys—L.C.C. Nutrition Centres and need for air and sunshine—Education Act and camps—Interpretation by education authorities—Air Raid Precautions and evacuation—Experiences of war in Spain—The recent war-scare—Scheme for evacuation and school camps.

Mention has been made of the lack on the part of the children under review of even simple experiences such as were observed in the course of school visits. The investigation disclosed that fifteen out of twenty-six boys had never been away from home for a holiday; two have been to a convalescent home; one goes "hopping"; four have been away once in their lives; one has been away for two holidays and three have holidays away annually. The parents of two boys confessed that although they were G.W.R. employees and could get free travelling facilities for their families, their pay was so low they could not put enough by during the year to pay the extra cost of staying away from home. Such a narrow existence leads to a narrow outlook and to an inadequate supply of ideas. In order to develop intellectual growth and to induce new ideas, holidays away from home are essential. Vocabulary would be enlarged. Learning to read, helped by a wider vocabulary, would be easier. A stay by the sea or in the country would raise the physical standard, increase resistance to disease, and counteract the ill-effects of early diseases of infancy.

The L.C.C. Report on Backward Children states:

> "In view of the generally beneficial effects of open-air schooling on health and attendance, it would be

> advantageous if backward children spent a greater proportion of their time in physical and other activities in the open air."

To this might be added—the granting of supplementary food and the provision of a fortnight's stay in the country under school control.

Early in 1919, Mr. H. A. L. Fisher, President of the Board of Education, stated that:

> "One of the catastrophes of education is that children, originally full of life and curiosity, become deadened by a mechanical system of education. The School Journey corrects this, and the Board of Education are now fully convinced of its success. Indeed the Education Act (1918) is intended, among other things, to foster such a movement. The local education authority may contribute to expenditure on Camp Schools. I trust that advantage will be taken of this. I think also that the tide of public opinion is with any such movement that tends to improve the health of any section of the population. It is a contribution, and it is a valuable contribution, to public hygiene as well as to educational advance. As in the education of our people, the right use of leisure is a very important matter, there are few movements, which, if vigorously promoted and generously supported, promise a greater or more certain return."

School Journeys and Camps mean a return to more natural methods of acquiring knowledge apart from the purely physical gains. Such a change from home and school life is a training in self-reliance, comradeship, and in character formation.

Of the physical benefits of a stay in the open-air, reports of the L.C.C. Nutrition Centres speak for themselves. These centres may be explained as "further inspection" centres. Children are referred to them by School Doctors for more detailed investigation than is possible at the routine medical inspections at the schools. They are centres for treatment and vitamin concentrates and other remedies, while scientific dietetic investigations are also carried out.

The 1936 reports observe that the effects of removal to a residential open-air school in the country of cases referred for malnutrition, anaemia and so on, are generally dramatic. Hoxton Centre, for example, says that the results of convalescence in the country are most satisfactory at the time of the child's return. In some, especially the smaller children, the improvement has been so great that the child has been unrecognisable, but unfortunately many deteriorate again owing to the housing conditions under which they live.

The 1937 Reports of the London Nutrition Centres contain the following—S.W. District:

> "Convalescence at suitable homes, residential open-air schools and open-air classes are all exceedingly useful for children attending nutrition centres. 'Hopping' or visits to relatives are not as a rule satisfactory. It is the regular routine and feeding and the atmosphere of quiet security that the children need. They often gain 4 or 5 lbs. in weight in as many weeks."

The relationship between physical health and mental efficiency has been established. The children of working-class areas of London need annual periods in the country for raising the standard of health for educational and intellectual gain.

Through School Journeys, the Kings Canadian Open-Air School at Bushey, and the Martello Camp at Walton-on-the-Naze, a number of London children do secure a stay in the country through the Education Authority. Further, London plans to arrange for each boy and girl over ten years of age to spend one day per week at centres to be erected in the Green Belt area.

Far more might be done under the Education Act which allows the authorities to set up School Camps and to send children to them without any direct cost to the parents. Many authorities take advantage of the Act. In reply to a question on School Camps by Mr. Sorenson, M.P., in the House of Commons on July 15th, 1937, Mr. Lindsay, M.P. replied:

> "During 1936, the latest year for which complete figures are available, 35 local education authorities in England and Wales are known to the Board to have sent children to *camp schools* held during term time, and 40 local education authorities sent parties of children to camps held during the summer holidays. The Board's attitude is very sympathetic to such camps, and they, of course, pay grants on the expenditure of local education authorities upon approved schemes."

On February 24th, 1938, Mr. Viant, M.P., also raised the matter in the House. He asked for a list of the education authorities which sent scholars to School Camps during the summer of 1937. Mr. Kenneth Lindsay, Parliamentary Secretary to the Board of Education, stated:

> "I am circulating in the Official Report a list of those authorities which are known to the Board to have sent schoolchildren to camps at some time during 1937. The list also includes those authorities which are known to have sent children on school journeys. The list may not be complete as the Board are not notified of all cases of camps or school journeys."

The list contained the names of 41 authorities that sent children to Holiday Camps; 49 that sent children to Camp Schools during term time; and 12 on School Journeys.

The writer circularised these authorities and found the results could be summarised under different headings. Under the term of "Holiday Camps" the only part taken by many of the authorities was to contribute 5*s*. per week per child who went camping under the auspices of the Scouts, Girl Guides, and Church Lad's Brigade. It would seem that such grants could be made to Co-operative Children's Circles and Woodcraft Folk.

The School Camps were run in various ways. Some authorities have their own permanent buildings, and send children away free. Others made a charge for the stay. In the Distressed Areas, the National Council for Social Service was responsible for the camps.

Among those that have established School Camps of their own, and make no charge on the children, are: Scotland, Dumbartonshire—the only authority in Scotland to take advantage of the 1936 Education Act; in England and Wales—Birkenhead, Walsall, Port Talbot, Wakefield, Keighley (Yorks), Sunderland and Cheshire.

As a result of an experiment in taking children away to the country, the Dumbartonshire Council established in 1938 two camps, each having dormitories, class rooms, recreation room, kitchen, staff-room, baths and usual offices. The Camps run for six months, and will house fifty pupils each during the school period and seventy-five during the holiday. Each pupil stays a fortnight.

Birkenhead rented premises. Two hundred and sixty-five boys and 267 girls spent a fortnight each away. Head teachers sent in a list of names of children who needed a change of air and good food. Preference was given to those children who had no other chance of getting a holiday. As the children came from the poorest homes, no contributions from the parents were required. The average gain in the fortnight for the boys was 2 lbs. 9 ozs. All reports stress the beneficial effects, both physical and mental, on the children.

The Health of the School Child, the report for 1936 of Sir Arthur McNalty, Chief Medical Officer of the Board of Education, contains these lines by Cowley:

> "O fields! O woods! When, when shall I be made
> The happy tenant of your share?
> Here's the springhead of pleasure's flood!
> Here's wealthy Nature's treasury,
> Where all the riches lie that she has coined and
> stamped for good."

Included in the Report was a chapter on schools and holiday camps which states:

> "If the world could be remoulded to our liking, every school would be an open-air school in a country or seaside setting, with ample facilities for playing-fields and the study of Nature."

At the present time, with war or the threat of war raging in so many parts of the World, the organisation of school camps takes on another aspect. The subject of Air-Raid Precautions looms large in the public eyes. The L.C.C. at very short notice organised a complete scheme of evacuation of the child population of London at the time of the Czecho-slovakian crisis. The children were to be billeted in cottages in safer areas.

Experience of unfortunate Spain shows that evacuation is essential. From the early days of the War, Government Spain realised the necessity of evacuating the children whose homes were near the war zone, not merely because of ordinary danger of war, but also because rebel airmen appeared to consider as their principal targets—playgrounds, children's homes and hospitals, and schools. The problem became a large one. A special Delegation was set up to deal with it. Children were distributed in safe areas in the following ways:

(1) By adoption into private families.
(2) In houses taken over by the Delegation.
(3) In former palaces, sanatoria and hotels.
(4) In large colonies.

The children formed committees to organise social life and leisure hours.

In January, 1938, the task of supervising the children was undertaken by the National Council for Evacuating Children. Not only were children sent to other parts of Spain, but were also sent to other parts of the democratic world, as English people are well aware. The organisational work was assisted by the Spanish Teachers' Federation who helped to evacuate 100,000 Madrid children and 25,000 from the Basque country and other regions and to get them settled down in a short time.

The system favoured for children at the end of 1938 in Spain was that of large colonies. A children's village was set up in the hills of Catalonia for one thousand war orphans. These children, aged eight to fourteen years, set up their own administration and were to grow their own food. The older children were given professional education, and would in turn help to teach their juniors. Spanish Children's Committees in fifteen countries were responsible for this scheme to help children who are "much older than their years" because of their wartime experiences. The village was planned by eminent French architects. It was to have a library, farm, hospital, school, gymnasium, houses and playing fields.

French youth were also subscribing to establish and maintain a camp for 5,000 Spanish children near Barcelona.

The organisation of School Camps can thus be directly linked up with A.R.P. The special section of the International Peace Campaign Science Commission proposes that mothers and young children should be sent to homes in the country, and if war ever comes, School Camps should be built for children of school age. The *Ploughshare* (November, 1938)—the Teachers' Peace Journal—gave an account of the evacuation of 4,000 special and nursery school children, who were billeted in private homes. The children needed a great deal of attention, and the Staff were sometimes visiting from 8 a.m. until 9 p.m. There was no adequate accommodation for the Staff, and no Staff meeting could be held. As for schooling, this seems to have been entirely forgotten.

These difficulties can be overcome by the organisation of Camps during peace time, and sending away children under the care of the teachers.

A scheme for the evacuation of three million school children has been worked out by Messrs. Golden and Buchanan, according to the *Evening Standard* of May 27th, 1938. Their proposals are:

> "Build now, in country areas which have already been chosen, 600 camp-schools with wooden huts, open-air classrooms, and sleeping and living accommodation for 500 children (the average size of a council elementary school).
>
> "When the camps are built, foundations, water supply and drainage will be put in to enable them to be extended to ten times the size, accommodating 5,000 children each. The extra huts needed will be stored in sections, ready for erecting.
>
> "During peace time, one camp-school will be allotted to ten existing elementary schools. Each school, accompanied by the teachers, will move out in rotation to its camp for one month a year. All the children will thus be accustomed to their own camp-schools.
>
> "It is estimated that each camp-school would cost £20,000 to construct. The total scheme would cost £12,000,000. Against this, a Medical Officer of Health has stated that a month in the country for all the school children would halve child illnesses, the debilitation resulting from which is said to cost the nation £20,000,000 a year.
>
> "The cost of keeping the children in the camp-schools, in peace or war, would be borne by the local education authorities of their home borough, with a block grant of 50 per cent from the Government under existing law."

Professor J. B. S. Haldane accepts this scheme, but stipulates,

> "Every camp will have a complete set of bomb-proof shelters. All the London children's camps will be situated on chalk downs, ranging through Kent and along the Chilterns to Wiltshire. Every camp will have its systems of caves under 60 feet of chalk and completely bomb-proof."[1]

The Government in February of this year proposed to build fifty School Camps such as are here advocated. Unfortunately, Sir John Anderson, Lord Privy Seal, makes it a condition that the Corporations responsible for these Camps will be required to recover for their peace time use 50 per cent of the capital, in addition to meeting all maintenance charges. This means a large number of children will have to pay for their stay, and will preclude from benefiting fully the children who need the country most—the children of the poor. The proposal to charge for a stay in the Camps should be vigorously opposed.

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[1] *A.R.P.* (V. Gollancz Ltd.)

CHAPTER XII

NURSERY SCHOOLS

Problem of the pre-school child—Welfare of the under-fives—Risk of infection reduced—Benefits to mother and child—Sea-side holidays—Importance of early stages of growth—Over-crowded homes—Street dangers—Full diet in infancy—Intellectual development and nursery schools—Child and child companionship—Extension of nursery schools and classes.

SIR GEORGE NEWMAN, in *Health of the School Child* (1933), writes that he has drawn attention to the problem of the nurture of the pre-school child for many years, and that "necessity demands" that he should do so again. He enumerates four reasons for this.

"(1) That this child under five years of age stands at the gate of our whole educational system.
(2) That this child is the seed-plot of everything—medical, physical, mental and moral.
(3) That what happens to this child before it is five is bound, inevitably, to have results for good or evil.
(4) That this child is not yet being effectually provided for.

"We still permit the prevalence of defect among the children of one to five years to continue, with the inevitable result that large numbers of them are admitted to school every year requiring immediate medical treatment (though happily defects among them have declined from 23 per cent in 1925 to 16 per cent in 1933). It is a wasteful process in money and in disease, both physical and mental. The child of two to five years of age is the seed-plot of future fruit, and soil not only worth careful

> and wise tilling, but one which we can only continue to neglect at our peril."

Margaret and Rachel Macmillan were the first to impress upon the public the need for the medical, educational and social welfare of children under five. They showed, by establishing the first open-air nursery school at Deptford, the advantages gained to health and mental development of open-air activity in the garden; of association with children of the same mental ability; of good food and afternoon rest to young children from poor homes.

Some criticism of the Nursery School movement is made, that children of tender age are more liable to infectious illnesses if brought together in large numbers. The late Chief Medical Officer to the Board of Education, Sir George Newman, has stated:

> "Nursery School children are less susceptible to infection, stronger, healthier, more alert and self-reliant, better poised. They pass to the Infants' School ready to face new conditions, fearlessly and well."

Dr. Austin Furness of West Ham confirms this after personal experience:

> "Under careful medical supervision the risk of infectious disease is less than was anticipated, particularly when the school is conducted on open-air lines."

The average attendance at his school was 80 per cent. The children usually have a complete medical overhaul every term, teeth also receiving attention. A school nurse regularly visits these schools for inspecting cleanliness, minor ailments and the beginnings of any infectious illnesses. Habits of personal cleanliness are inculcated by regular washing, and use of tooth brush. By such means, children are protected and strengthened against ill-health, and physical defects are remedied. A sound foundation is thus built up. This avoids breaks in the infants' school period, lessens absences when fundamentals are being taught.

The Board of Education is not blind to the benefits of such schools. In 1935 its report included:

> "It is interesting to note that the nursery school children do very well when passing on to the elementary schools. They develop into finer types and can usually be distinguished from other children who have not had the advantage of previous attendance at the nursery school."

The enthusiasm of the nursery school teachers is unlimited. Not only do they perform their task with love for the children, but in many schools they are bold enough to organise a summer holiday camp at the sea-side for the toddlers. What this means for children in overcrowded homes who ordinarily would never see the country for many years—in health, knowledge and experiences—cannot be overestimated. On the physical side, apart from gain in weight, they are more immune from illness in the winter. She is a bold woman, even with effective help, who is prepared to shoulder the responsibility of taking 120-odd children, ages two to five, to the country!

Dr. Davies, Director of Education for Willesden—an education authority that is doing such fine work in building model sunshine schools and catering so extensively for its "under fives", addressed a conference at County Hall in 1936 on the education of children under seven. He remarked:

> "All will agree that the children in most urgent need of provision are those from homes where both parents follow some kind of employment. But the number of children in this category forms but a small proportion of elementary school population. The vast majority of mothers are solely employed as their own housekeepers,

saddled with the onerous and exacting task of performing all the menial tasks in their own homes. The number who have any form of domestic help is negligible. Is some provision for the care and education of the children of pre-school age from the ordinary servantless home a necessity? To me the answer is obvious. Can any one contend that the harassed housewife, who is responsible for the cleaning, cooking, washing, etc., has any time to devote to the scientific training and upbringing of her young children? The mother in the tenement, the flat, or the ordinary dwelling-house in our large towns and cities, however deep-rooted her maternal instinct, and however ardent her love for her child, finds it as difficult to organise a healthy, happy and regular life, in the absence of light, sunshine, space, fresh air and the requisite apparatus and amenities for her children of pre-school age as she would to make provision for their education from five to fourteen.

"But should not the basis be even wider than this? These are the days of small families. The only child is a frequent phenomenon, and is a creature for whom I have the deepest sympathy. Children were never intended for solitary confinement with adults, but should have an opportunity of enjoying a community life, sharing and enjoying with others the good things provided for them.

"When we opened a Nursery Class for three-year-olds in one of our small-family and good-class areas, to our astonishment we found that one only of the thirty entrants was without physical blemish of some kind. Fortunately the damage at this early age was not beyond repair.

"The Authority which I serve is of the opinion that the ultimate aim should be to make adequate provision for all children of pre-school age, and not merely provide for those in the so-called depressed localities."

Two of the many cases which show the necessity for nursery schools are here described. The first mentioned is by Dr. Mary Christie of Cheltenham, that of a child of two and a half years who had not learnt to speak. A loving mother did everything for him and anticipated his every need. Every living being has an urge to grow, to do and to dare. This urge was thwarted in the child by over-protection. When sent to a nursery school, where he had to share in the activities of other children, he became normal.

The second case is of a little girl of two years of age. The mother was at home, but was occupied with secretarial work of a statistical nature as well as doing general routine housework. The child, after being left alone for a time, would cry plaintively: "Mummie, play with me!" But the busy mother enjoined silence, or errors in the work on which she was engaged might result. There was no nursery school for the child. Without doubt, this suppression and lack of play and playmates at that young impressionable age have left their mark.

The importance of the first five years of a child's life is stressed by Phoebe E. Cusden, sometime Organising Secretary of the Nursery School Association, in her book, *The English Nursery School* (Kegan Paul). She agrees that the development of any living organism is influenced greatly by the conditions to which it is subject in the early stages of its growth. These conditions include fresh air and ample space for exercise, warmth and shelter, suitable food in kind and quantity, training of habits in personal cleanliness, and health supervision. An important factor in such development consists in having people with the special training necessary to guide correctly the social instincts of these little ones. The pre-school child needs an environment of its own, and not one designed for adults, which leads to restriction of a child's natural groping to understand a new world. He needs one in which he can, through activity, educate himself, satisfy his natural curiosity, develop physically and mentally, and learn to co-operate with others.

Other arguments can be put forward in favour of the general establishment of nursery schools. The overcrowding survey of 1935 showed that 341,554 dwellings in England

and Wales were overcrowded, even where a kitchen or living-room was considered as available for sleeping. If, however, such room were not included for sleeping accommodation in the survey, then 853,119 families would be considered as living under overcrowded conditions. Such homes are certainly unsuitable for rearing children, and the immediate provision of nursery schools is necessary for children from these homes.

The danger of the street with its fast moving traffic, and of long de-restricted roads around London cannot be overemphasised. The report of the Ministry of Transport on Road Accidents for the year ended March 31st, 1937, shows the total number killed under five years of age was 329 and the number injured 7,454. These figures represent 10 per cent of the total casualties for England and Wales. Undoubtedly, many of these lives would have been saved, and casualties avoided, had the children been under the protection of nursery school teachers.

That children, and girls in particular, need a full diet in infancy, and which they are only likely to get if they attend a nursery school, is emphasised by Dr. G. C. M. M'Gonigle, Medical Officer, Stockton-on-Tees, in his report for 1933:

> "It is true that actual starvation is almost unknown in England, but a large percentage of the population suffers from a partial starvation of certain elements of an optimum dietary. Every child who has carious teeth has suffered from a shortage of certain mineral and vitamin constituents of an optimum diet. Every woman who has suffered a difficult childbirth as a result of rachitic deformity of the pelvis has at some period of her childhood been starved."

On the mental plane, Professor Gray says:

> "Attendance at a nursery school seems to give children an advantage in intellectual powers which persist throughout their school career."

Dr. Burt stresses the importance of infant life. In *The Juvenile Delinquent* he writes:

> "The pre-school period is a period vitally decisive; it is then that the foundations of both moral character and temperamental eccentricity are first laid down."

One may quote further from *The Nursery Years*, by Dr. Susan Isaacs, M.A., D.S.C. (Routledge):

> "No matter how friendly and successful our own relation with them is, they need other children. For we press too heavily upon them, by the mere fact of being adults. With other children they can work at their fantasies more freely, in their dramatic games, and in making and doing together; and can get real, concrete experience of social relations on their own level of desire and control."

Evidence shows that although Authorities are permitted to establish nursery schools, very few have availed themselves of the Act. Only 26 education authorities out of a total of 316, by April, 1937, were responsible for 40 such schools having accommodation for 4,326 children. There were a further 47 schools recognised by the Board of Education with room for 6,735 children. Including the children under five attending elementary schools, less than one-tenth of the child population of these years were at school, and only a very small percentage of the 1,671,000 children between the ages of two and five were attending nursery schools.

Further education of grown-ups is necessary to the manifold advantages to their children of the nursery school—it solves the problem of a suitable environment for the child of the slum, for the only child and for children of the more comfortably placed parents. The frequent medical inspections enable doctors to cure and prevent ill-health; the food at school supplements that given at home; open-air activities build the body, habits of hygiene are instilled; the youngsters are made into social creatures.

The London County Council is grappling with the question of the under-fives. Apart from the three nursery schools under their control, in the programme for 1938-41, they have included five new nursery schools and twenty-four additional classes in infants' departments. During the summer holiday, two day nurseries were established in two London parks, in Bermondsey and Battersea, where mothers could leave their children between the ages of five months and five years for the cost of ½*d*. an hour.

The conclusions one reaches on nursery schools are:

(1) That they are necessary for all children of poor and rich parents.

(2) That as this is a comparatively new movement, the establishment of such schools must proceed in some orderly manner as is being done through the triennial programme of the L.C.C.

> "The steady rise in the cost of living, continued unemployment and an increasing sense of insecurity, make the quick extension of adequate provision for young children in Nursery schools and Nursery Classes a matter of urgency."[1]

(3) That the greatest need for such schools is in working-class areas, because of poor environment, lack of space for play, danger from road accidents, insufficient house room, inadequate food, and lack of sunshine and air.

(4) That nursery classes do not meet the needs of such areas.

(5) That where nursery classes do exist in poor areas, then a midday meal shall be provided and the children kept under supervision during the dinner hour.

[1] Nursery School Association Report (1937).

(6) That taking the toddlers away for three weeks to the country or sea-side every year is a feature which is worthy of the highest praise and should be extended to all nursery schools and nursery-class children. It is to be hoped that this scheme will be introduced into infants' schools.

CHAPTER XIII

FOREGROUND

Backwardness a problem of the poor—Environment described typical of most working-class children—Slum clearance—Importance of nutrition to mothers and children—Nursery schools—Extension of school feeding—Clothing—School camps—Teaching methods—Bright school buildings—Propaganda—Public Action to secure improvements—What can be done—War and social services—Programme.

THIS STUDY OF the backward child leads to a number of striking conclusions. Inasmuch as the incidence of backwardness among children is 20 per cent in working-class areas and negligible in the richer residential districts, one must assume that it is a problem of the schools where the poor reside. The low pay, the irregular nature of the work, and long spells of unemployment, lead to chronic poverty in the homes of the large mass of workers. Such poverty leads to a low level of housing conditions, of home environment, of culture, of conversation, of food, of travel and of sunshine and air. These in turn prevent maximum development of the body and the mind and tend to physical and mental retardation.

It may be argued that the conclusions here reached are based on a study of twenty-six cases. On this, Dr. Cyril Burt in a paper read to the Royal Society on March 24th, 1938, said:

> "Heavy criticism was incurred in early days by those (psychologists) who were content to correlate just 10 or 20 cases, and owing to impression that statistical methods could not be applied to less than 50 to 100 cases, the more accurate individual studies of the first investigations have

given place to vast collections of inaccurate data amassed by means of group tests."

Sufficient details of each case have been given under different headings to show that this particular group of boys is typical in their home life of any other group of working-class children. The range of parents' occupation of the twenty-six boys stretches from the lowest grades of poverty to the comparatively comfortable home of the train-driver. While it is true that this group were either intellectually or educationally backward (and in some cases both), their environment was of course the same as their brothers and sisters, who in spite of poverty have succeeded in maintaining a normal mentality. The material conditions at home are the same. So that one can assume that any improvements in such conditions would apply to all children who through poverty are not able to develop to their maximum in physique.

Children spend the greater part of their lives in their own homes. It is here that remedies should be applied. Slum dwellings should be rapidly cleared, model blocks of flats in the crowded parts of towns erected, not forgetting lifts and a continuous hot-water supply; the law concerning overcrowding needs amending, so that kitchen or living-room shall not count as a bedroom in estimating overcrowding; and rents shall be low enough to leave an income to allow of a fuller life than the workers enjoy at present. Private squares in the heart of towns like London should be thrown open to public use, and cheaper means of travel facilities should be provided on Saturdays and Sundays, to encourage people to take their families to parks and open spaces.

The importance of nutrition has been stressed. Treatment to be really effective has to be preventive rather than remedial. The rearing of a healthy race should always be in the forefront of the minds of our administrators and not at times of national peril, or of war only. To ensure a healthy child, the expectant mother needs not only the optimum diet of an adult, but, in view of the nourishment that the rapidly growing being inside her demands, her diet should be considerably more than the woman not in that condition. This applies, too, to the nursing mother. The expectant and nursing mothers can get such food under the Maternity and Child Welfare Act through the local Councils. Mothers should realise that they need a food allowance of at least 10*s*. per week per head to provide an adequate diet for their family. If they cannot spend this amount, then malnutrition is resulting and all the evils of malnutrition are developing in themselves, their menfolk and their children. If there is any trace of pauperisation in the treatment meted out to them, the remedy is in their own hands—to elect as administrators more men and women whose upbringing and history show them to be sympathetic to the under-dog.

From the age of two to five or to seven years, nursery schools are necessary for all little ones. The need being far greater among the working class, such areas should first receive the attention of the authorities. Where, however, it is found to be expedient to arrange for nursery classes, then the standard of organisation should be the same as for nursery schools, and a midday meal provided. This meal would serve the purpose not only of making up deficiencies in the home dietary, but also as an educational factor and as a training in social habits.

The need for supplementary school feeding for all other children of school age shall be determined by the child's state of nutrition, and this shall be judged according to the income of the parents. If the income allows an amount to be spent on food considered adequate by Sir John Orr, then one may consider that the family is nourished in accordance with the findings of dieticians unless medical examination shows otherwise. If the income is below such figure, then the child shall be fed by the local education authority under the Education Act. To avoid over questioning, the standard of income should be the one that governs the award of a grant to scholarship winners in London. Children of the unemployed should be fed free, without any deduction from statutory benefits as is already the practice in the County of

Middlesex. Dining-rooms for children should be made attractive, with small lino-covered tables and flowers, chairs, knives, forks and spoons to every dinner, not only when a joint is served. Salad and/or raw fruit should be served at every dinner, not merely once a week.

The clothing of the children, particularly in inclement weather, is responsible for a great number of absences. As short, frequent absences lead to retardation, the local authorities should be empowered to supply shoes and mackintoshes when necessary. The London County Council supply mackintoshes to children going on school journeys. An extra supply of these might be obtained for use in bad weather, thereby raising the attendance.

The importance of school-camps, free to all school children, has been discussed in relation to physical and intellectual development. The time, with A.R.P. so much to the fore, is now opportune for establishing such camps, and would close a serious gap in the lives of these children who rarely have the opportunity to travel.

Concerning internal school organisation, the best method of preventing educational retardation is to reduce generally the size of classes to a maximum of thirty on roll, beginning with the infants' school. Newer practical methods, devised to seize the interest and imagination of the child will help to stimulate the inner urge to develop, will lead to self-discipline and obviate the necessity of scolding and corporal punishment. In view of the importance of methods of teaching, a central committee might be formed to collect and to disseminate new methods of teaching, as well as any other material which will help solve the problem of the backward child. Knowledge imparted should be of a kind which will appeal to the child as being related to his own life, his family, the community and the world at large. Apart from the larger question of school camps, regulations should allow of school children of all ages being taken to visit places of interest in the vicinity of the child's home or school. The L.C.C.'s scheme for each boy and girl over ten to spend a day of the school week in the country could be with advantage extended to all junior children.

Schools should be a home for the children, and should therefore be bright, cheerful, warm and provide amenities lacking in many homes. A personal interest might be taken by the teachers in the home life of the child. For the backward children, investigations such as described are essential to discover the causes of backwardness and to apply the necessary remedies. This calls for extra qualifications on the part of the teacher of such a class of children. Time should be allowed the teacher at the beginning of the term, when, free of the responsibility of actual teaching, he can investigate the life of each child. A thorough medical examination is essential at which the teacher should be present. The L.C.C. Report on Backwardness in Elementary Schools (1937) makes the following recommendation:

> "As conditional backwardness may arise from unsatisfactory home conditions, close co-operation between teachers, medical officers and the care committee organisation is required for effective remedial treatment of backwardness in some cases."

Suggestions have been made for the prevention and treatment of physical and mental retardation. Sir John Orr stresses that in a democratic country the necessary legislation must be preceded by an intelligent demand on the part of the people:

> "It is necessary that the public should realise the extent to which health and physique can be improved by better feeding. A low standard of diet leads to a great amount of preventable disease and ill-health, involving great expense on the State, hospitals and charitable organisations."

The education of the people to the needs of the child can be undertaken by such bodies as the Committee Against

Malnutrition, Parents' Associations, Co-operative Guilds, Trade Unions, Teachers' Organisations, Church Guilds and other adult movements through such means as "Education Advance Conferences". The old ingrained idea that anything not actually paid for over the counter is charity and is to be avoided needs uprooting. The parent should be made to realise that the State has a duty to the child and to the parent to keep all in a state of well-being commensurate with the progress in production of commodities made by that State. While food is destroyed to keep up prices, there is no need for people to be content with a deficient diet. Why is it that so many children of this country are badly shod, yet the boot factories in Northampton are working on short time?

Very little new legislation is necessary to raise the level of the children's lives to its optimum. The Law is there. What are needed are members of public bodies, of local educational authorities, of care committees, of groups of school managers ready to interpret liberally the Law so as to give the best of food, the roomiest of homes, the brightest of schools, the maximum of sunshine to our children. Representatives of such bodies should be drawn from the parents of the children who need most protection—the children of the working class. Mothers and fathers should come forward ready to serve on these bodies. They should lose that sense of inferiority expressed by a builder on a job of luxury flats who, on being asked whether he would like to occupy one, exclaimed: "That's not for the likes of us." The man who tills the soil should reap the rewards of his labour in the way of the best food for himself and his family. The man who builds the house should be content with nothing less than the brightest home with all the advantages that science bestows.

As an illustration of what can be done by parents to secure improved conditions for their children, one can quote the Willesden School Feeding Campaign of 1933. Parents gathered together under the National Unemployed Workers' Movement. After interviewing the Care

Committee worker, studying the Medical Officer's reports, visiting the School Feeding Centre, interviewing children and parents, the following requests (as printed in a leaflet) were made of the Council:

"(1) That the income figures per head of the family qualifying for free dinners be increased by 2*s.* per week, e.g. if there are five in a family and the income per head per week after deducting rent, insurance and other items allowed by the Willesden Education Committee is 5*s.* 4*d.* or below the children now get a free dinner. We ask that this figure be increased to 7*s.* 4*d.*

(2) Part payments for meals on a proportionate basis, as is done in Maternity cases, Dental treatment, etc.

(3) That the Willesden Council press the Middlesex Public Assistance Committee not to deduct from relief in respect of School feeding.

(4) That the children be fed seven days a week throughout the year and receive Breakfast and Dinner.

(5) That the Menu be improved in accordance with the suggestions contained in the Ministry of Health's Report on Feeding in P.A.C. institutions by supplying raw fruit, salads, butter and milk.

(6) That the children be fed at their own schools. Wykeham school-children now go to Strode Road Centre (1½ miles), and Stonebridge school-children now go to Lower Place Centre (1 mile).

(7) That necessitous physically defective children be conveyed to the Centre when their School is closed."

A deputation was received by the Education Committee, and was supported by a march of parents and children through the district to the Town Hall. The results achieved were:

(1) Lead spoons replaced by stainless knives, forks and spoons.

(2) Floors, previously covered with newspaper when the children came to the Centres for their food, now covered with rush mats.

(3) Income scale per head per week qualifying for free meals amended as follows:

No. in family	*Old Scale*	*New Scale (April 1st, 1934)*
2	8*s*. 4*d*.	10*s*. 6*d*.
3	7*s*. 4*d*.	9*s*. 6*d*.
4	6*s*. 4*d*.	8*s*. 6*d*.
5 or over	5*s*. 4*d*.	7*s*. 6*d*.

(Breakfasts and dinners are given to children in Elementary Schools in Willesden if the income per head, after certain deductions, falls below the figures in the last column. It should be noted that these figures were last revised in 1934, and in view of the increase in the cost of living call for revision again.)

(4) The Middlesex County Council throughout its area no longer deducts from relief in respect of school feeding.

(5) The children are fed seven days a week throughout the year.

(6) The menu has been improved to include fruit; butter has been substituted for margarine.

(7) The children who attend school some distance away from the Dining Centre are conveyed to the Centre by school buses.

The Willesden improvement in school feeding is but one example where the people, with knowledge of what they desire and with determination to secure the remedies, achieve their aim. Similar activity on the part of parents in other areas would secure amelioration of their conditions of life.

There is talk of reduction of expenditure on Social Services. Millions of pounds are being spent on armament production and preparation for war. The armament firms made nearly 20 millions profit in 1937. While defence is necessary against a possible aggressor, profiteering out of a country's need is, to put it mildly, unpatriotic. A reduction in the amount of armaments could be achieved if this country associated in a real League of Nations and linked up with France, Russia and other democratic countries to secure peace.

The main burden of rates, which pay for social services, now falls upon working men, professional people and small shopkeepers. London has made a good step forward in trying to reduce this burden. Herbert Morrison's Bill for the rating of site values would, if it were passed by Parliament, help to relieve the situation. It would give the L.C.C. the right to levy a rate on landlords or site owners according to the value of the land owned.

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